UK MET OFFICE
GLOBAL DATA MONITORING REPORT

October 05

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1. Introduction

As the WMO-appointed lead centre for monitoring surface marine data, the U.K. Meteorological Office produces monthly statistics on the quality of these observations received at RSMC Exeter. This report includes this information along with statistics for most other types of data. The figures and tables contained herein are presented according to the agreed standards for the exchange of monitoring results.

The report is based on data received at the UK Meteorological Office Headquarters, Exeter in time for inclusion into the appropriate analysis (the current cut-off time is approximately 7.2 hours after each analysis time). The evaluation of data quality is based on comparison with the appropriate 6-hour global model forecast (background) field, although to provide background values valid at the observation time for non-main hour data, time-interpolation of the T+3, T+6 and T+9 forecasts is used; and for sea surface temperature the background field is the analysis from the previous day. Generally, the background field is of high quality except in data sparse areas, tropical regions and areas close to steep orography where care should be taken in interpreting the statistics shown.

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2 Global Data Monitoring Statistics

Ships, Fixed buoys, Platforms and Drifting buoys observations

TABLES 1and 2 contain lists of the stations which are considered to have returned suspect observations of pressure, windspeed, wind direction or sea surface temperature, as appropriate, during the month. The criteria for quality control are given on the header page for each table.

Figures 1 and 2 show 10 degree lat/long box average numbers of SHIP/SYNOP and DRIFTER observations received per day throughout the month at Exeter and assimilated into model runs. All data are included. Box average values are plotted as the nearest whole number (values of x.5 are rounded up). Where the average is more than 999, then 999 is plotted. A box with no observations is blank. If the 24 hour average >0 but <0.5, then 0 is plotted.

Synop Observations

Table 3 contains a list of stations which are considered to have returned suspect observations of Pressure during the month. The criteria for quality control are given in the header page. The reporting practice of each station is included in the list of statistics.

At the UK Met. Office, we monitor SYNOP pressure after it has been interpolated to our Global NWP Model's surface height. For most synoptic stations (about 75%), the surface pressure (at the model surface) is calculated from the reported station-level pressure, or, if this is not available, the height of a standard pressure-level (e.g. 850 hPa or 700 hPa). If neither of these are available, or if the reported station-level pressure is deemed unreliable, the reported mean sea-level pressure is used (about 25% of SYNOPs).

Aircraft observations

Tables 4A (300-150 hPa) and 4B (1000-301 hPa) contain lists of statistics calculated from data received from all airline carriers.

Figures 3A (300-150 hPa) and 3B (1000-301 hPa) show 10 degree lat/long box average numbers of aircraft reports in AIREP/AMDAR code (including AIREP, ACAR, AMDAR, ASDAR and ADS) received per day throughout the month at Exeter and assimilated into model runs. Observations with a vector wind difference (compared with the model background field) of >60 m s^{-1} have been excluded. Box average values are plotted as the nearest whole number (values of x.5 are rounded up). Where the average is more than 999, then 999 is plotted. A box with no observations is blank. If the 24 hour average >0 but <0.5, then 0 is plotted.

Figures 4A-7A (300-150 hPa) and 4B-7B (1000-301 hPa) show wind statistics for AIREP/ASDAR in AIREP/AMDAR code (including AIREP, ACAR, AMDAR, ASDAR and ADS). Observations with a vector wind difference > 60 m s^{-1} have been excluded. Statistics have not been calculated for 10 degree lat/long boxes containing <31 observations.

Figure	Parameter
4	Mean wind vectors
5	Mean observation - background wind vector
6	Mean observation-background speed (m s^{-1})
7	RMS observation-background vector (m s^{-1})

Radiosonde Observations

TABLES 5-7 contain lists of the stations which are considered to have returned suspect observations of geopotential height, vector wind or wind direction, as appropriate, during the month. The criteria for quality control are given on the header page for each table.

Figures 8 and 9 show 10 degree lat/long box average numbers of TEMP 500 hPa GEOPOTENTIAL HEIGHT and TEMP/PILOT 300 hPa WIND observations received per day throughout the month at Exeter and assimilated into model runs. Data from all hours are included. Box average values are plotted as the nearest whole number (values of x.5 are rounded up). Where the average is more than 999, then 999 is plotted. A box with no observations is blank. If the 24 hour average >0 but <0.5, then 0 is plotted.

APPENDIX I shows details of the gross error limits used in TABLES 5 and 6 and the weights used in the RMS values in TABLE 5.

Satellite Observations

Figures 10-24 show satellite wind statistics for all geostationary satellites. All plots other than **AVAILABILITY** show average data where there are > 10 observations in a 10 degree lat/long box.

Figure	Parameter Plotted	Layer (hPa)
10	Availability/average daily number	701-1000
11	Vector mean wind (observed)	701-1000
12	Observation-background vector wind difference	701-1000
13	Mean observation-background speed differences	701-1000
14	RMS observation-background vector difference	701-1000
15	Availability/average daily number	401-700
16	Vector mean wind (observed)	401-700
17	Observation-background vector wind difference	401-700
18	Mean observation-background speed differences	401-700
19	RMS observation-background vector difference	401-700
20	Availability/average daily number	101-400
21	Vector mean wind (observed)	101-400
22	Observation-background vector wind difference	101-400
23	Mean observation-background speed differences	101-400
24	RMS observation-background vector difference	101-400

Figures 25-39 show sounding statistics from the polar orbitting satellite NOAA-15. Figure 25 shows the mean daily number of ATOVS soundings, and figures 26-39 show mean and standard deviation observation-background differences for brightness temperature, for selected channels.

Figure		Weighting function peak (hPa)
26	Mean	Surface (HIRS8)
27	SD	Surface (HIRS8)
28	Mean	700 (HIRS15)
29	SD	700 (HIRS15)
30	Mean	500-700 (HIRS11)
31	SD	500-700 (HIRS11)
32	Mean	400 (HIRS4)
33	SD	400 (HIRS4)
34	Mean	700 (AMSUA5)
35	SD	700 (AMSUA5)
36	Mean	300 (AMSUA7)
37	SD	300 (AMSUA7)
38	Mean	100 (AMSUA9)
39	RMS	100 (AMSUA9)

Figures 40-54 show sounding statistics from the polar orbitting satellite NOAA-16. Figure 40 shows the mean daily number of ATOVS soundings, and figures 41-54 show mean and standard deviation observation-background differences for brightness temperature, for selected channels.

Figure		Weighting function peak (hPa)
41	Mean	Surface (HIRS8)
42	SD	Surface (HIRS8)
43	Mean	700 (HIRS15)
44	SD	700 (HIRS15)
45	Mean	500-700 (HIRS11)
46	SD	500-700 (HIRS11)
47	Mean	400 (HIRS4)
48	SD	400 (HIRS4)
49	Mean	700 (AMSUA5)
50	SD	700 (AMSUA5)
51	Mean	300 (AMSUA7)
52	SD	300 (AMSUA7)
53	Mean	100 (AMSUA9)
54	RMS	100 (AMSUA9)

Figures 55-69 show sounding statistics from the polar orbitting satellite NOAA-17. Figure 55 shows the mean daily number of ATOVS soundings, and figures 56-69 show mean and standard deviation observation-background differences for brightness temperature for selected channels.

Figure		Weighting function peak (hPa)
56	Mean	Surface (HIRS8)
57	SD	Surface (HIRS8)
58	Mean	700 (HIRS15)
59	SD	700 (HIRS15)
60	Mean	500-700 (HIRS11)
61	SD	500-700 (HIRS11)
62	Mean	400 (HIRS4)
63	SD	400 (HIRS4)
64	Mean	700 (AMSUA5)
65	SD	700 (AMSUA5)
66	Mean	300 (AMSUA7)
67	SD	300 (AMSUA7)
68	Mean	100 (AMSUA9)
69	RMS	100 (AMSUA9)

N.B. All satellite sounding data is bias-corrected (and thinned) before being assimilated in the UKMO NWP model.

3 Composite Observing Systems for the North Atlantic (COSNA)

This section shows statistics for upper air (radiosonde and aircraft) and surface (drifter) data for the North Atlantic area for data received at Exeter during the month.

TABLE 8 shows quality statistics for **Mean Sea-level Pressure, Windspeed and Wind Direction** received at Exeter in DRIFTER code during the month for the area 10°N - 80°N, 85°W - 0°W.

TABLE 9 shows quality statistics for **Temperature and Vector Wind** received at Exeter from aircraft during the month for the area 40°N - 70°N, 60°W - 0°W.

Table 10 - 13 show quality statistics **(Geopotential Height and Windspeed at 100 and 500 hPa)** for all TEMPSHIPS in the area bounded by 0°N - 90°N, 100°W - 40°E and selected TEMP stations within the same area.

Revisions

1. May 95 Monitoring statistics for NOAA-11 removed. Figures 25-27 now show data for NOAA-12
2. May 95 Notes giving details of observations included in wind direction statistics clarified and corrected.
3. August 95 Monitoring statistics for NOAA-14 added with figures 28-30.
4. February 96 Monitoring statistics for GOES-7 have been replaced by statistics for GOES-8 and GOES-9.
5. April 96. 500 km and 120 km SATEMs replaced by 120 km resolution temperature profiles produced locally from the radiances disseminated by NESDIS.
6. February 97 Monitoring statistics for Meteosat 5 have been replaced by statistics for Meteosat 6.
7. Sept 97 Monitoring statistics for NOAA-12 removed. Figures 25-27 now show data for NOAA-11
8. January 1998. Increase in resolution of UKMO global forecast model.
9. April 1998. GOES winds ceased on 2nd March 1998, and were replaced with GOES high resolution winds from 15th.
10. June 1998. Monitoring statistics for Meteosat-6 were replaced by monitoring statistics for Meteosat-7, from 3rd June.
11. June 1998. Corrections in our processing of radiosonde data resulted in a decrease in the number of 500hPa geopotential heights in Figure 8 of about 230 per 24 hours (compared with previous reports), and a small increase in the number of 300hPa winds in Figure 9.
12. July 1998. Meteosat-5 began transmitting winds from 2nd July, at 63 degrees East (over the Indian ocean), and this data is included in the statistics.
13. July 1998. GOES-9 (at 135W) was replaced mid-month by GOES-10 (initially at 105W, moving towards 135W).
14. February 1999. Problems with NOAA-11, and TOVS data ceased to be assimilated from 26 February.
15. March 1999. UKMO introduced 3-D VAR assimilation system on 29 March, and also began assimilating ATOVS data from NOAA-15.
16. May 1999. Included statistics for ATOVS sounding data from NOAA-15.
17. September 1999. Included statistics for high resolution visible winds from Meteosat-5 and Meteosat-7.
18. October 1999. The 3-D VAR assimilation system was upgraded on 19 October, including improvements in the assimilation of ATOVS radiances, use of SSM/I surface wind speed, an improvement in the calculation of surface pressure for SYNOPs, and thinning and revision of observation errors of aircraft data.
19. November 1999. High resolution visible winds from Meteosat-5 and Meteosat-7 removed until used operationally.
20. April 2000. Aireps in Table 4 and Figures 3-7 split into ranges 300-150 hPa (A) and 1000-301 hPa (B).
21. September 2000. Corrected an error affecting the mean positions of a minority of buoys in Table 2.
22. November 2000. An error in the production of Table 6 was corrected. Previously, some sondes with suspect vector winds were being missed.
23. April 2001. Included statistics for ATOVS sounding data from NOAA-16.
24. May 2001. Included statistics for sea surface temperatures from marine surface observations.
25. December 2002. Included statistics for ATOVS sounding data from NOAA-17.
26. December 2002. Meteosat-7 and Meteosat-5 SATOB winds replaced by higher resolution BUFR-coded winds.
27. November 2003. Included temperature and relative humidity statistics for ships, fixed buoys and platforms in Table 1.
28. November 2003. NOAA 17 statistics no longer available due to malfunction of the AMSU-A instrument.

TABLE 1

MONITORING OF MARINE SURFACE OBSERVATIONS
MONTHLY SUSPECT LIST - SHIPS, FIXED BUOYS AND PLATFORMS
MONITORING CENTRE: EXETER
MONTH: Oct 05

Monitoring procedures

Period :One calendar month.

Data monitored :Reports from each unique identifier for ships, fixed buoys and platforms.

Standard of comparison :Background field from UKMO global model.

Observation times :All hours

Elements monitored
:Mean sea level pressure (hPa).
:Wind speed (m s^{-1}).
:Wind direction (Degrees).
:Air temperature (Degrees C).
:Relative Humidity (%).
:Sea surface temperature (Degrees).

Parameters monitored

:NOBS :Number of observations received excluding duplicates.

:PGE :Percentage of observations with gross errors.

:%REJ :Percentage of observations flagged excluding those with gross errors.

:SD :SD of difference of observations from background values excluding those with gross errors.

:BIAS :Mean difference of observations from background values excluding those with gross errors.
N.B. a positive bias indicates the wind observation is veered to the background.

:RMS :Root Mean Square difference of observations from background values excluding those with gross errors.

GROSS ERROR LIMIT
:15 hPa (pressure)
:25 m s^{-1} (vector wind)
:15 degrees (air temperature)
:10 degrees (sea surface temperature)

SELECTION CRITERIA :NOBS ≥ 20 , and one or more of the following:

1.|bias|	≥ 4 hPa	(pressure),
	≥ 5 m s^{-1}	(wind speed),
	≥ 30 degrees	(direction).
	≥ 3 degrees	(sea surface temperature).
	≥ 4 degrees	(air temperature)
	≥ 15%	(relative humidity)
2.SD	≥ 6 hPa	(pressure),
	≥ 80 degrees	(direction).
	≥ 5 degrees	(sea surface temperature).
	≥ 6 degrees	(air temperature)
	≥ 25%	(relative humidity)
3.PGE	≥ 25	

N.B. Observations of wind direction are only included in the wind direction statistics if the observed OR background wind speed > 5 m s^{-1}

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
AUFI	P	26	0	4	1.5	4.1	4.4
A8FR5	P	27	0	100	0.7	5.8	5.8
CSGN	P	99	0	100	0.5	-11.5	11.5
C6FZ6	P	44	0	52	2.0	6.1	6.4
C6JD9	P	21	0	90	2.1	8.2	8.5
C6PZ3	P	35	0	100	1.7	6.1	6.4
DCFG2	P	28	0	4	1.3	4.0	4.2
ELTY4	P	28	0	0	0.6	-4.7	4.7
KS028	P	22	95	100	0.0	-10.8	10.8
KS049	P	234	0	0	0.8	-4.3	4.4
LAOX5	P	29	3	3	0.9	4.1	4.2
OUHC2	P	32	0	100	1.2	5.2	5.3
SYAQ	P	44	0	20	0.9	6.4	6.4
UANF	P	31	0	90	1.5	4.9	5.2
UBXD	P	32	6	66	4.2	-4.0	5.8
VC6750	P	277	17	51	5.1	-4.7	7.0
VVKT	P	22	0	32	3.9	-4.2	5.7
V2AC9	P	38	0	5	1.3	-4.4	4.6
V2AW5	P	43	0	2	1.1	5.0	5.1
WADZ	P	86	80	100	0.7	14.1	14.1
WAM7635	P	39	0	38	3.9	4.8	6.2
WCX5321	P	27	15	74	3.6	-8.2	8.9
WDB9918	P	28	0	89	1.5	-5.1	5.3
WDCJ	P	45	2	82	3.1	-7.4	8.0
WRC2049	P	20	5	70	3.6	5.6	6.7
WYT8569	P	102	0	65	2.7	4.7	5.5
ZCBN9	P	53	0	0	0.9	4.0	4.1

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
A8GS3	SPEED	47	0	89	4.5	9.7	10.7
DIHN	SPEED	25	0	100	4.5	5.2	6.9
H3PK	SPEED	29	0	48	3.2	-6.7	7.4
UCTP	SPEED	105	0	49	3.9	5.7	6.9
VEP717	SPEED	218	0	2	3.7	5.7	6.8
VROB	SPEED	115	29	100	5.9	4.6	7.5
ZCDF8	SPEED	42	0	55	3.5	5.1	6.2

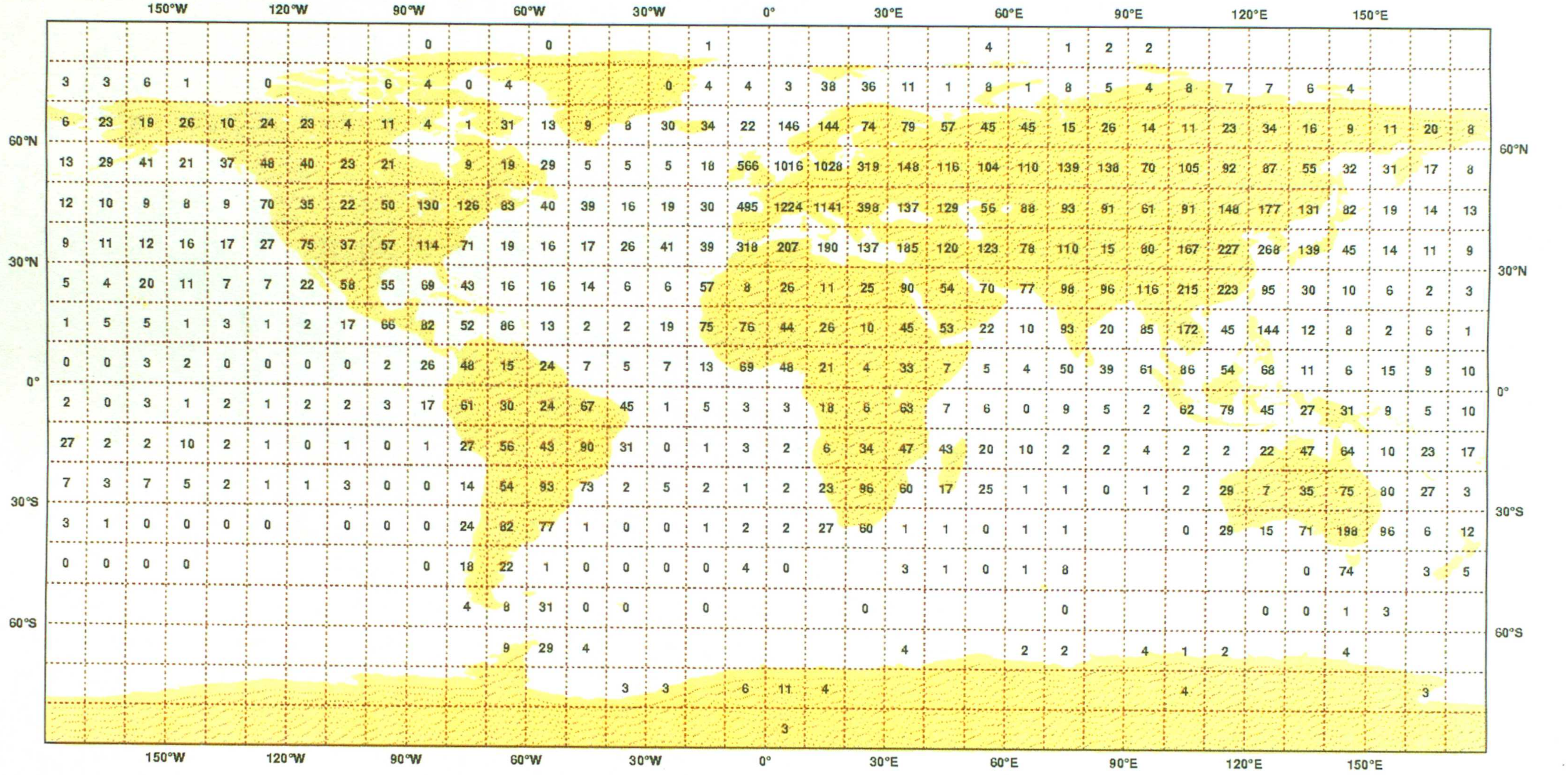
IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
CFN3031	DIRN.	80	0	0	51.1	-33.8	61.3
H3VT	DIRN.	22	0	0	43.6	-35.3	56.1
KHRC	DIRN.	29	0	0	30.5	-36.9	47.9
LAJV4	DIRN.	47	0	0	66.8	-45.3	80.7
VROB	DIRN.	82	40	0	89.2	-4.6	89.3
VRVP2	DIRN.	49	6	0	65.4	33.9	73.7
WTF3319	DIRN.	21	0	0	63.4	30.2	70.2
23092	DIRN.	31	0	0	32.5	-37.0	49.3
23100	DIRN.	44	0	0	90.8	29.6	95.5
53057	DIRN.	74	0	0	24.9	-49.1	55.1

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
KS028	T	81	41	100	7.2	-6.3	9.6
OWDD	T	86	2	100	2.7	4.1	4.9
SP34	T	74	0	100	3.2	-6.1	6.9
VAAZ	T	540	91	100	2.2	-12.0	12.2
WCW9126	T	119	2	100	3.5	8.0	8.8
WDB6493	T	22	0	100	3.0	6.3	7.0
WDC6925	T	26	0	100	0.9	-7.4	7.4
WXJ63	T	226	0	100	2.7	6.6	7.1
45136	T	700	0	100	1.8	4.9	5.3
46081	T	708	2	100	2.6	8.7	9.0
46092	T	110	0	100	3.4	-4.1	5.3

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
A8FZ5	RH	54	0	100	13.9	-27.8	31.1
CG2522	RH	107	0	100	8.9	-15.7	18.0
CG2992	RH	73	0	100	8.1	-16.5	18.4
C6JD9	RH	20	0	100	6.9	24.1	25.1
DBBT	RH	57	0	100	18.9	-16.1	24.8
DGCR	RH	82	0	100	9.5	-31.2	32.6
DHQS	RH	24	0	100	8.5	-17.6	19.6
FNAT	RH	68	0	100	4.5	19.8	20.3
JDAI	RH	55	0	100	6.1	17.1	18.2
OUEX	RH	23	0	100	16.0	-36.3	39.7
VAAZ	RH	105	0	100	9.3	-52.8	53.6
VRVN6	RH	26	0	100	11.1	22.5	25.1
V2AW5	RH	23	0	100	13.1	17.3	21.6
ZCBW2	RH	67	0	100	10.4	16.6	19.6
42035	RH	38	0	100	5.2	-74.1	74.3
62140	RH	23	0	100	9.5	15.1	17.9

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
A8CB4	SST	20	0	100	1.6	-3.5	3.9
A8GS3	SST	44	50	52	2.3	-0.1	2.3
CG2522	SST	23	4	678	1.0	8.2	8.2
CG2992	SST	23	0	852	2.4	3.8	4.5
C6RJ6	SST	43	0	102	0.8	-3.1	3.2
C6SI6	SST	27	4	52	3.3	-3.3	4.7
DCCN2	SST	20	0	100	0.7	-3.4	3.5
DIDY	SST	20	15	100	2.0	-6.2	6.5
DIGW	SST	37	0	16	0.9	-3.3	3.4
ELSM9	SST	75	0	100	1.6	-6.5	6.7
ELZW9	SST	40	0	100	0.7	3.1	3.1
FNFD	SST	87	0	87	0.8	4.7	4.8
KHRC	SST	45	0	100	0.8	-5.5	5.5
KRHX	SST	67	0	100	1.8	-3.8	4.2
KS011	SST	98	0	48	1.8	-4.2	4.6
KS049	SST	213	0	111	2.4	-3.4	4.1
S6IW	SST	47	0	100	1.3	-5.2	5.4
UACU	SST	52	0	75	2.2	-3.9	4.5
UCDM	SST	22	9	100	2.1	-3.9	4.4
UCMS	SST	26	0	42	2.0	3.4	3.9
UCPD	SST	30	0	53	1.3	3.9	4.1
UGGA	SST	24	25	100	1.4	-1.9	2.4
UHOM	SST	23	0	61	1.5	-3.3	3.6
V2AC6	SST	29	0	100	1.8	3.3	3.8
WCZ5528	SST	67	1	51	2.7	-3.4	4.3
WE4805	SST	27	7	104	1.2	-3.2	3.5
WZJD	SST	56	2	100	0.8	-4.1	4.2
ZMFR	SST	172	100	100			
3FKM8	SST	33	0	103	1.8	-4.5	4.8
45139	SST	338	0	92	1.8	-5.1	5.4
45141	SST	587	2	100	1.4	8.5	8.6
45145	SST	278	5	100	1.1	6.7	6.8
45150	SST	44	0	100	1.3	3.8	4.0
61298	SST	422	100	100			
61299	SST	387	100	100			
9HQK6	SST	39	0	59	2.7	-4.4	5.1

Figure 1. SHIP/SYNOP mean daily count. OCTOBER 2005
All hours
Global average number of observations in 24 hours = 20946



									0			0				1							4		1	2	2								
3	3	6	1		0			6	4	0	4				0	4	4	3	38	36	11	1	8	1	8	5	4	8	7	7	6	4			
6	23	19	26	10	24	23	4	11	4	1	31	13	9	8	30	34	22	146	144	74	79	57	45	45	15	26	14	11	23	34	16	9	11	20	8
13	29	41	21	37	48	40	23	21		9	19	29	5	5	5	18	566	1016	1028	319	148	116	104	110	139	138	70	105	92	87	55	32	31	17	8
12	10	9	8	9	70	35	22	50	130	126	83	40	39	16	19	30	495	1224	1141	398	137	129	56	88	93	91	61	91	148	177	131	82	19	14	13
9	11	12	16	17	27	75	37	57	114	71	19	16	17	26	41	39	318	207	190	137	185	120	123	78	110	15	80	167	227	268	139	45	14	11	9
5	4	20	11	7	7	22	58	55	69	43	16	16	14	6	6	57	8	26	11	25	90	54	70	77	98	96	116	215	223	95	30	10	6	2	3
1	5	5	1	3	1	2	17	66	82	52	86	13	2	2	19	75	76	44	26	10	45	53	22	10	93	20	85	172	45	144	12	8	2	6	1
0	0	3	2	0	0	0	0	2	26	48	15	24	7	5	7	13	69	48	21	4	33	7	5	4	50	39	61	86	54	68	11	6	15	9	10
2	0	3	1	2	1	2	2	3	17	61	30	24	67	45	1	5	3	3	18	6	63	7	6	0	9	5	2	62	79	45	27	31	9	5	10
27	2	2	10	2	1	0	1	0	1	27	56	43	90	31	0	1	3	2	6	34	47	43	20	10	2	2	4	2	2	22	47	64	10	23	17
7	3	7	5	2	1	1	3	0	0	14	54	93	73	2	5	2	1	2	23	96	60	17	25	1	1	0	1	2	29	7	35	75	80	27	3
3	1	0	0	0	0		0	0	0	24	82	77	1	0	0	1	2	2	27	60	1	1	0	1	1			0	29	15	71	198	96	6	12
0	0	0	0						0	18	22	1	0	0	0	0	4	0			3	1	0	1	8						0	74		3	5
										4	8	31	0	0		0				0					0					0	0	1	3		
											9	29	4								4			2	2		4	1	2			4			
														3	3		6	11	4									4						3	
																		3																	

TABLE 2

MONITORING OF MARINE SURFACE OBSERVATIONS
MONTHLY SUSPECT LIST - DRIFTING BUOYS
MONITORING CENTRE: EXETER
MONTH: Oct 05

Monitoring procedures

Period :One calendar month.

Data monitored :Reports from each unique identifier for drifting buoys.

Standard of comparison :Background field from UKMO global model.

Position :Average latitude and longitude for period.

Observation times : All hours

Elements monitored
:Mean sea level pressure (hPa).
:Wind speed (m s^{-1}).
:Wind direction (degrees).
:Sea surface temperature (degrees).

Parameters monitored

:NOBS :Number of observations received excluding duplicates.

:PGE :Percentage of observations with gross errors.

:%REJ : Percentage of observations flagged excluding those with gross errors

:SD :SD of difference of observations from background values excluding those with gross errors.

:BIAS :Mean difference of observations from background values excluding those with gross errors.
N.B. a positive bias indicates the wind observation is veered to the background.

:RMS :Root Mean Square difference of observations from background values excluding those with gross errors.

GROSS ERROR LIMIT
:15 hPa (pressure)
:25 m s^{-1} (vector wind)
:10 degrees (sea surface temperature)

SELECTION CRITERIA : NOBS ≥ 20 , and one or more of the following:

1.|bias|
≥ 4 hPa (pressure),
≥ 5 m s^{-1} (wind speed),
≥ 30 degrees (direction).
≥ 3 degrees (sea surface temperature).

2.SD
≥ 6 hPa (pressure),
≥ 80 degrees (direction).
≥ 5 degrees (sea surface temperature).

3.PGE ≥ 25.

N.B. Observations of wind direction are only included in the wind direction statistics if the observed OR background wind speed > 5 m s^{-1}

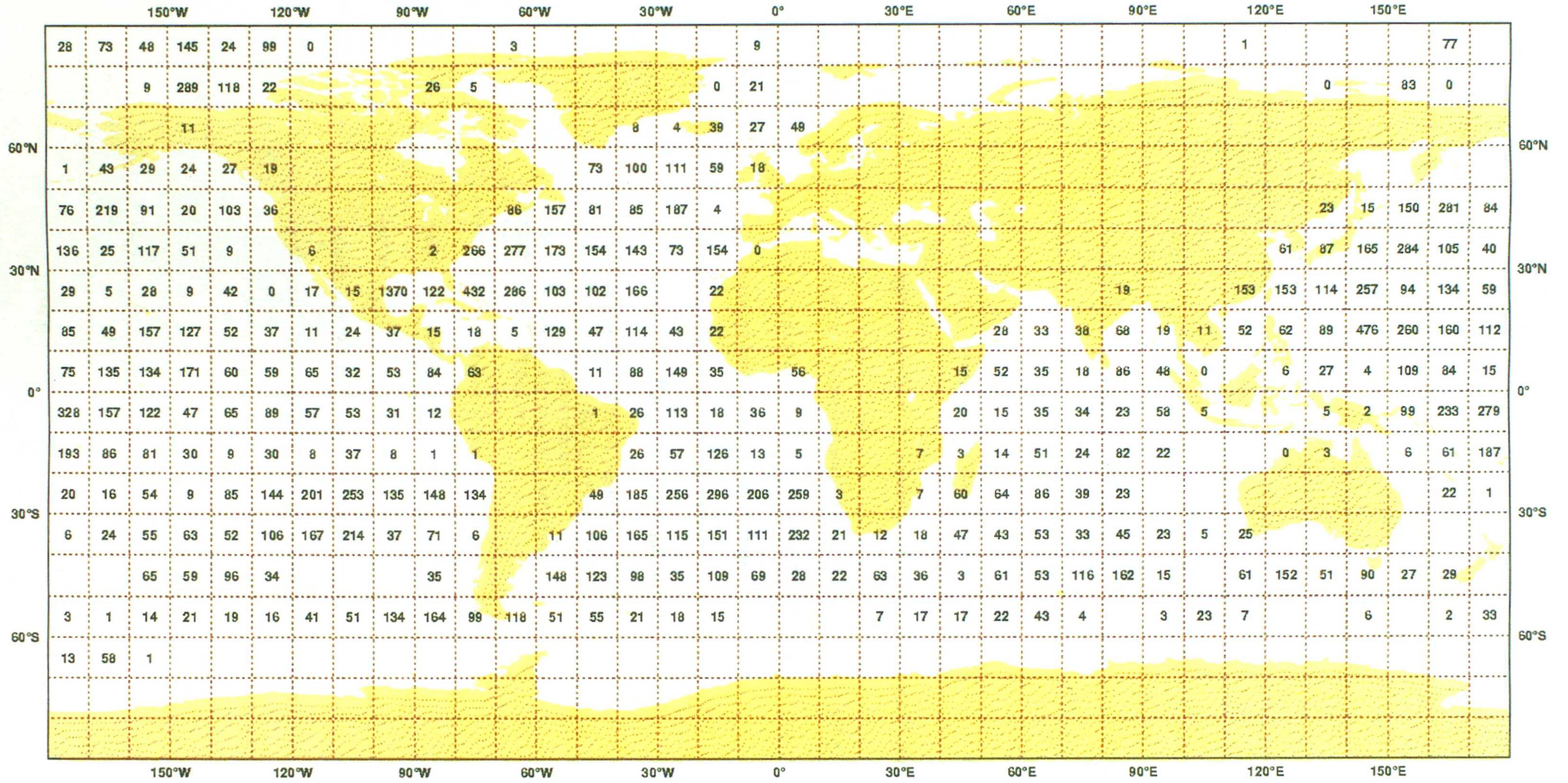
IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
21942	34.7	155.9	P	456	8	65	4.6	4.7	6.6
23948	4.2	51.9	P	549	84	100	6.7	7.2	9.8
23949	3.3	50.7	P	585	98	99	3.1	4.9	5.8
23950	1.2	87.9	P	486	100	100			
25574	87.0	115.7	P	26	46	92	7.8	-1.0	7.9
41929	32.8	-67.6	P	415	22	79	4.7	6.1	7.7
41935	32.5	-75.4	P	122	4	70	3.4	5.7	6.6
46531	42.0	-161.6	P	253	17	62	4.3	4.3	6.1
61557	41.1	29.1	P	53	96	100	3.9	-4.1	5.7

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
41625	26.1	-70.7	SPEED	656	0	100	3.1	5.7	6.5
41670	25.9	-93.0	SPEED	301	1	100	3.0	9.6	10.0
41938	26.0	-93.2	SPEED	105	78	100	8.1	13.2	15.5
41940	25.9	-93.1	SPEED	325	2	100	4.1	8.7	9.6

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
41542	27.2	-74.0	DIRN.	316	3	0	28.6	119.7	123.1
41643	22.7	-67.0	DIRN.	501	0	0	21.3	33.0	39.3

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
15502	-16.1	-12.6	SST	562	0	100	0.1	-3.4	3.4
15504	-15.3	-16.5	SST	615	0	100	0.1	-3.7	3.7
15510	-13.1	-23.4	SST	628	0	100	0.2	-3.7	3.7
15649	-18.2	-15.3	SST	691	0	100	0.2	-3.4	3.4
22625	18.6	121.1	SST	42	0	100	1.3	-5.8	5.9
31551	-46.9	-50.6	SST	1159	0	100	2.4	3.4	4.1
32538	-7.5	-156.4	SST	652	0	100	0.1	-4.3	4.3
32620	-6.7	-169.4	SST	669	0	100	0.2	-4.2	4.2
41557	37.7	-57.4	SST	809	24	63	3.5	3.3	4.8
41912	34.7	-69.4	SST	833	0	100	0.4	-4.0	4.0
41969	26.2	-73.2	SST	630	0	100	0.2	-4.1	4.1
44509	45.3	-40.8	SST	193	0	100	0.2	3.3	3.3
46972	29.0	129.6	SST	136	0	100	0.4	5.2	5.2
51743	-4.2	178.2	SST	681	0	100	0.2	-4.3	4.3
51747	10.2	-127.0	SST	656	0	100	0.2	-4.1	4.1
51748	-8.5	-179.7	SST	698	0	100	0.2	-4.4	4.4
51751	10.0	-126.7	SST	633	0	100	0.2	-4.1	4.1
51752	-10.2	-167.3	SST	661	0	100	0.2	-4.2	4.2
61769	41.7	32.3	SST	144	3	83	5.1	-1.2	5.2
62512	40.1	-15.6	SST	71	39	63	3.4	-2.7	4.3
62557	26.3	-32.1	SST	449	39	51	1.8	1.0	2.0

Figure 2. DRIFTER mean daily count. OCTOBER 2005
All hours
Global average number of observations in 24 hours = 24480



28	73	48	145	24	99	0					3						9												1					77	
		9	289	118	22				26	5						0	21														0		83	0	
			11											8	4	39	27	49																	
1	43	29	24	27	19								73	100	111	59	18																		
76	219	91	20	103	36						86	157	81	85	187	4															23	15	150	281	84
136	25	117	51	9		6			2	266	277	173	154	143	73	154	0													61	87	165	284	105	40
29	5	28	9	42	0	17	15	1370	122	432	286	103	102	166		22										19			153	153	114	257	94	134	59
85	49	157	127	52	37	11	24	37	15	18	5	129	47	114	43	22							28	33	38	68	19	11	52	62	89	476	260	160	112
75	135	134	171	60	59	65	32	53	84	63			11	88	149	35		56				15	52	35	18	86	48	0		6	27	4	109	84	15
328	157	122	47	65	89	57	53	31	12				1	26	113	18	36	9				20	15	35	34	23	58	5			5	2	99	233	279
193	86	81	30	9	30	8	37	8	1	1				26	57	126	13	5			7	3	14	51	24	82	22			0	3		6	61	187
20	16	54	9	85	144	201	253	135	148	134			49	185	256	296	206	259	3		7	60	64	86	39	23								22	1
6	24	55	63	52	106	167	214	37	71	6		11	106	165	115	151	111	232	21	12	18	47	43	53	33	45	23	5	25						
		65	59	96	34				35			148	123	98	35	109	69	28	22	63	36	3	61	53	116	162	15		61	152	51	90	27	29	
3	1	14	21	19	16	41	51	134	164	99	118	51	55	21	18	15				7	17	17	22	43	4		3	23	7			6		2	33
13	58	1																																	

TABLE 3

MONITORING OF LAND SURFACE OBSERVATIONS
MONTHLY SUSPECT LIST - SYNOPS & AUTOSYNOPS
MONITORING CENTRE: EXETER
MONTH: Oct 05

Monitoring procedures

Period		:One calendar month.
Data monitored		:Reports from each unique identifier for synops & autosynops.
Standard of comparison		:Background field from UKMO global model.
Observation times		:00, 06, 12, 18 UTC
Elements monitored		:Surface pressure (hPa).
Parameters monitored	:HT(m)	:Station height (in metres) as given in WMO No. 9 Vol A
	:RP	:Pressure reporting practice M=mean sea level pressure (hPa) reported. S=Station level pressure reported. 8=Geopotential height (m) of 850 hPa surface reported. 7=Geopotential height (m) of 700 hPa surface reported.
	:NOBS	:Number of observations received excluding duplicates.
	:NGE	:Number of observations with gross errors.
	:PGE	:Percentage of observations with gross errors.
	:%REJ	:Percentage of observations flagged excluding those with gross errors.
	:SD	:SD of difference of observations from background values excluding those with gross errors.
	:BIAS	:Mean difference of observations from background values excluding those with gross errors.
	:RMS	:Root Mean Square difference of observations from background values excluding those with gross errors.
GROSS ERROR LIMIT	:15 hPa	(pressure)
SELECTION CRITERIA	:NOBS	≥ 20 ,and one or more of the following:
	1.|bias|	≥ 4 hPa
	2. SD	≥ 6 hPa
	3.PGE	≥ 25.

N.B. For stn ht ≥ 500m, mslp is that calculated from station level pressure where available.
For stn ht < 500m, mslp is that as reported by the station where available.

SUSPECT SYNOPS (PRESSURE) BY WMO REGION OCT 200

WMO REGION 1:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
60320	35.9N	5.4W	2	MS	43	0	0	2	1.3	-8.2	8.3
60423	36.3N	8.0E	680	S8	85	85	100	0			
62056	32.8N	21.9E	625	S8	77	3	4	0	0.8	-5.1	5.2
63450	9.0N	38.8E	2354	MS	81	0	0	0	0.8	4.1	4.2
63671	1.8N	40.1E	244	M	103	0	0	0	0.7	-4.8	4.9
63801	4.9S	29.6E	882	S8	77	1	1	0	0.9	8.2	8.2
63881	8.0S	31.6E	1923	S	52	9	17	0	0.7	13.8	13.8
68014	19.6S	18.1E	1411	S8	83	0	0	0	0.8	-7.2	7.2
68030	18.5S	25.6E	1071	S8	81	0	0	0	3.5	9.5	10.1
68038	20.5S	26.0E	903	8	69	0	0	0	0.8	4.0	4.1
68102	19.9S	16.4E	1343	S8	115	0	0	0	0.8	6.1	6.2
68300	26.6S	15.1E	16	MS	114	18	16	0	0.8	-13.5	13.5
68312	26.5S	18.1E	1067	S8	82	0	0	0	0.8	4.6	4.7
68396	26.5S	31.3E	641	S8	57	0	0	0	1.1	4.7	4.8
68575	30.0S	30.0E	1175	S8	116	116	100	0			

WMO REGION 2:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
30554	54.5N	113.6E	995	MS	118	1	1	1	0.8	11.8	11.8
31534	50.4N	131.0E	230	MS	113	3	3	7	3.0	-4.4	5.3
36982	41.9N	78.2E	3635	S7	114	0	0	0	0.7	5.5	5.5
38846	38.4N	70.0E	1437	S8	95	2	2	2	1.5	-6.6	6.8
40435	27.0N	44.1E	991	MS	59	0	0	2	2.5	6.9	7.3
40700	39.6N	47.9E	45	MS	114	2	2	2	1.1	-5.2	5.3
40713	37.4N	46.3E	1475	MS	116	23	20	1	1.0	13.2	13.2
40741	36.5N	61.2E	235	MS	115	0	0	0	0.7	-4.9	4.9
40743	36.2N	57.7E	978	MS	116	0	0	0	0.7	5.6	5.6
40757	35.6N	53.4E	1171	MS	118	0	0	0	0.9	4.2	4.3
40780	33.6N	46.4E	1362	MS	116	0	0	0	0.9	5.0	5.1
40854	29.1N	58.4E	1067	MS	115	0	0	1	1.5	11.1	11.2
41252	23.4N	56.5E	244	MS	97	0	0	0	0.7	-9.0	9.0
41254	23.1N	57.6E	1755	S8	116	116	100	0			
41396	16.0N	48.9E	700	MS	59	1	2	3	1.4	5.4	5.6
41466	13.7N	44.1E	1402	S8	51	2	4	2	1.2	-7.5	7.6
41518	35.7N	74.6E	1469	8	36	0	0	6	1.5	-4.1	4.4
41520	35.4N	74.9E	2168	7	38	0	0	100	2.4	9.7	10.0
41532	34.4N	73.5E	2301	MS	23	23	100	0			
41757	25.1N	62.3E	96	M	48	0	0	50	3.5	6.1	7.0
44416	28.6N	81.6E	720	MS	61	2	3	3	2.1	4.0	4.5
47022	40.8N	128.2E	1224	S	88	2	2	2	1.5	4.8	5.0
47678	33.1N	139.8E	79	MS	118	0	0	0	0.7	-8.9	8.9
48921	21.6N	101.9E	923	S	46	46	100	0			
48924	21.1N	101.5E	644	S	56	0	0	0	0.6	11.2	11.2
48925	20.7N	102.0E	550	S	56	1	2	0	0.7	-10.0	10.0
48938	19.2N	101.7E	326	MS	56	42	75	0	0.4	14.4	14.4
50978	45.3N	130.9E	234	MS	118	0	0	0	0.8	-6.0	6.1
52866	36.6N	101.8E	2262	S	118	0	0	0	1.1	-4.1	4.2
53646	38.3N	109.8E	1058	MS	118	0	0	0	0.6	-12.3	12.3
56462	29.0N	101.5E	2994	S	119	0	0	0	1.3	8.5	8.6
56768	25.0N	101.5E	1773	S	117	0	0	0	0.6	-5.3	5.3
57816	26.6N	106.7E	1074	MS	118	111	94	0	0.3	-14.7	14.7
59663	21.8N	112.0E	22	MS	118	0	0	0	0.8	-8.0	8.0

WMO REGION 3:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
80099	7.1N	70.7W	122	MS	33	0	0	0	1.1	-5.5	5.6
80426	9.4N	70.6W	582	M	33	1	3	27	0.8	4.5	4.6
82181	2.0S	54.1W	146	MS	86	1	1	1	0.9	5.8	5.9
82704	7.6S	72.7W	170	MS	85	0	0	2	1.7	-4.0	4.3
83235	12.4S	46.4W	604	MS	87	0	0	0	0.9	6.1	6.2
83332	14.1S	46.4W	826	MS	88	7	8	2	1.1	13.4	13.4
83470	17.9S	50.9W	727	MS	78	1	1	0	0.8	-5.5	5.6
83531	18.6S	46.5W	940	MS	82	0	0	1	1.0	-6.6	6.7
83836	25.5S	50.6W	837	MS	87	0	0	0	0.9	-4.4	4.5
84132	0.9S	75.4W	215	MS	48	0	0	6	1.3	4.0	4.2
84140	1.1S	79.5W	73	MS	57	0	0	100	0.5	7.1	7.1
84143	1.0S	78.6W	2628	S7	55	1	2	75	0.8	-4.1	4.2
84160	1.3S	78.6W	2940	S7	59	1	2	98	0.6	10.9	10.9
84377	3.8S	73.3W	125	MS	104	0	0	0	1.2	4.1	4.3
84425	5.9S	76.1W	179	MS	20	0	0	0	1.0	4.5	4.6
84452	6.8S	79.8W	29	S	105	0	0	0	0.7	6.2	6.2
84455	6.5S	76.4W	281	MS	84	1	1	0	1.0	6.4	6.5
84472	7.1S	78.5W	2620	S	51	0	0	0	0.7	-5.9	5.9
84474	7.2S	76.7W	350	S	20	0	0	0	1.2	8.5	8.6
84501	8.1S	79.0W	26	MS	83	0	0	0	0.7	5.0	5.0
84686	13.6S	72.0W	3248	S	105	0	0	0	0.8	-4.4	4.5
84688	13.7S	73.4W	3444	S	42	0	0	0	0.4	-12.5	12.5
84720	14.9S	75.0W	567	MS	51	0	0	0	0.6	4.7	4.7
84782	18.1S	70.3W	468	MS	77	0	0	0	0.9	5.5	5.6
85140	14.3S	67.4W	140	MS	52	0	0	0	1.3	8.8	8.9
85264	18.5S	64.1W	1998	S	51	51	100	0			
85312	19.8S	63.9W	992	S	38	0	0	0	1.7	-9.5	9.7
85406	18.3S	70.3W	55	M	116	0	0	0	0.8	5.4	5.5
85432	22.5S	68.9W	2320	S8	83	0	0	0	0.5	4.2	4.2

WMO REGION 4:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
71060	52.5N	116.1W	230	MS	117	117	100	0			
71181	47.1N	55.3W	29	MS	115	0	0	0	0.6	-5.8	5.8
71581	54.5N	128.6W	215	MS	117	37	32	0	5.8	-7.5	9.5
71979	53.8N	118.4W	1542	S	103	0	0	0	0.7	9.6	9.6
72327	36.1N	86.7W	182	MS	117	0	0	0	0.6	4.1	4.1
76055	31.0N	114.9W	440	MS	65	65	100	0			
76225	28.6N	106.1W	1435	MS	84	0	0	2	1.1	-4.7	4.8
76382	25.5N	103.5W	1124	MS	78	0	0	0	0.6	4.2	4.2
76543	22.0N	98.8W	104	MS	25	1	4	4	0.7	9.3	9.3
76658	19.2N	103.7W	494	MS	43	0	0	0	0.9	5.8	5.9
76762	17.5N	99.5W	1265	MS	95	1	1	0	0.7	5.8	5.8
76843	16.8N	93.1W	528	MS	109	0	0	0	0.7	-4.8	4.9
78482	18.2N	71.1W	3	M	51	0	0	14	1.0	4.3	4.4
78588	17.2N	87.5W	-265	M	118	118	100	0			
78655	14.0N	89.6W	660	MS	46	0	0	4	2.0	4.0	4.5

WMO REGION 5:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
92010	6.1S	145.4E	1587	M	36	0	0	3	1.6	9.5	9.6
94130	14.8S	131.9E	120	MS	117	0	0	0	0.9	5.2	5.3
96505	3.7N	115.7E	-9999	8	45	45	100	0			
97284	8.6S	120.5E	1170	S8	83	2	2	0	0.7	4.5	4.6
97378	10.7S	123.1E	1	MS	39	37	95	0	0.1	-14.4	14.4

WMO REGION 6:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
01360	61.9N	7.9E	711	MS	111	0	0	0	1.1	6.6	6.7
04416	72.6N	38.4W	3202	S	112	3	3	3	0.7	4.3	4.4
06239	54.9N	44.7E	49	MS	355	164	46	0	8.8	1.4	8.9
06605	47.1N	7.1E	1599	S8	118	0	0	0	0.9	-4.2	4.3
08912	42.9N	0.8W	1434	MS	46	46	100	0			
10850	48.8N	10.7E	457	MS	353	0	0	0	0.4	-5.9	5.9
11116	47.5N	10.8E	870	MS	59	1	2	2	0.8	4.4	4.5
13269	44.3N	19.9E	176	MS	118	0	0	0	0.6	7.6	7.6
14554	44.9N	18.4E	136	S	58	2	3	0	0.6	-13.7	13.7
16344	39.3N	16.4E	1710	S8	319	0	0	0	1.1	4.3	4.4
16538	40.1N	9.3E	1022	S	36	0	0	0	0.6	9.8	9.8
17270	37.1N	38.8E	547	MS	51	0	0	0	0.7	10.0	10.0
17521	35.2N	33.5E	285	MS	105	105	100	0			

ANTARCTIC:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
89004	71.7S	2.8W	815	MS	83	1	1	0	1.4	-7.8	7.9
89257	75.4S	59.9W	40	S	761	12	2	0	2.2	-6.8	7.1
89262	67.0S	60.6W	17	S	333	0	0	0	1.3	-4.2	4.4
89266	72.2S	60.2W	91	S	331	325	98	0	8.5	-4.8	9.8
89272	74.8S	70.5W	1395	S	108	108	100	25			
89512	70.8S	11.8E	140	MS	106	0	0	1	1.5	-4.9	5.1
89528	82.8S	29.0E	2912	S	421	4	1	9	2.6	-6.8	7.3
89610	65.9S	113.1E	90	S	335	0	0	0	1.1	-9.3	9.4
89614	66.7S	111.5E	500	S	323	323	100	0			
89661	73.5S	169.8E	200	S	73	0	0	14	3.3	4.7	5.7
89666	76.7S	163.0E	200	S	26	26	100	8			
89744	74.0S	43.1E	3353	S	93	0	0	0	0.6	7.2	7.2
89769	78.5S	168.4E	50	M	825	0	0	0	2.4	-4.8	5.4
89811	66.7S	112.8E	1366	M	335	0	0	0	1.3	-5.7	5.8
89868	79.9S	170.0E	60	S	346	0	0	0	1.6	-5.0	5.2

TABLE 4A

MONTHLY MONITORING OF AIRCRAFT OBSERVATIONS
MONITORING CENTRE: EXETER
MONTH: Oct 05

Monitoring procedures

Period		:One calendar month.
Data monitored		:Statistics for each airline carrier.
Area monitored		:90°N - 90°S, 180°W - 180°E.
Standard of comparison		:Background field from UKMO global model.
Observation times		:All hours combined.
Level(s) monitored		:300.0 - 150.0 hPa
Elements monitored		:TEMP in °C ; WIND in m s^{-1}
Parameters monitored	:N REP.	:Number of observations received excluding duplicates.
	:PG	:Percentage of observations with gross errors.
	:PR	:Percentage of observations rejected by quality control including rejections from the duplicate check.
	:PC	:Percentage of observations with calm winds.
	:RMS	:Root Mean Square difference of observations from background values excluding those with gross errors in Temperature & vector wind.
	:BIAS	:Mean difference of observations from background values excluding those with gross errors in Temperature & Wind Speed.
GROSS ERROR LIMITS		:10.0 °C ; 60 m s^{-1} Vector Wind
SELECTION CRITERIA		:N REP ≥ 20

NB : All American ACARS data are grouped together and statistics are shown at the bottom of the table as "US ACARS".

		TEMPERATURE						WIND			
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
AAH	2425	0	46	1.3	0.4	2390	0	46	0	5.1	0.2
AAL	9232	0	25	1.3	0.2	8732	0	24	0	4.8	0.3
AAR	712	1	6	1.5	-0.6	689	1	7	0	7.7	0.2
ACA	3124	0	9	1.4	0.0	2567	0	9	0	6.1	0.3
ACF	42	7	43	3.0	0.3	20	0	70	0	30.4	-7.4
ACI	137	0	15	1.3	0.5	129	0	12	0	5.7	0.2
AEA	1505	0	3	1.4	0.2	1252	0	5	0	8.3	0.2
AFL	513	0	4	1.7	0.2	267	0	5	0	9.2	-0.6
AFR	4936	0	4	1.3	0.2	4762	0	4	0	5.7	0.4
AFZ	12245	0	10	1.6	1.1	12243	0	15	0	5.7	0.9
AJM	219	1	11	1.9	-0.2	171	0	13	0	12.7	0.8
AJX	230	0	2	1.4	0.9	224	0	4	0	7.8	0.3
AME	38	3	8	1.5	-1.1	38	0	11	0	11.6	-0.6
AMT	1967	0	43	1.1	-0.1	1945	0	43	0	5.6	0.1
AMX	414	1	6	1.6	0.3	336	0	8	0	10.9	0.4
ANA	46	0	13	1.5	0.0	44	2	14	0	6.2	0.4
ANZ	6546	0	34	1.4	0.1	6481	0	34	0	7.2	0.4
ARG	26	0	27	2.0	-0.7	23	0	30	0	5.7	-0.3
ATN	151	1	100	3.0	-0.9	107	0	19	0	11.2	3.2
AUA	500	0	2	1.3	0.6	483	0	2	0	4.9	0.4
AVA	443	0	4	1.4	0.5	442	0	5	0	8.8	0.2
AVN	136	0	47	1.1	-0.1	136	0	47	0	5.5	-0.3
AXF	72	0	36	1.2	-0.2	72	0	39	0	9.3	0.0
AZA	525	4	15	2.3	0.5	429	1	6	0	8.9	-0.1
BAL	368	0	5	1.3	0.1	350	0	5	0	7.2	0.4
BAW	658	0	12	2.0	-0.3	425	0	12	0	8.6	0.3
BBR	116	1	3	1.8	0.5	110	0	3	0	7.8	1.4
BMA	448	0	5	1.4	0.0	381	0	4	0	5.4	0.5
BPA	306	5	56	2.9	1.5	291	0	9	0	9.5	0.1
BWA	427	1	5	1.6	0.0	344	0	2	0	5.7	0.6
CAL	85	0	6	1.7	-0.6	89	0	12	0	10.8	1.6
CCA	343	2	16	2.5	0.3	332	1	100	0	13.8	-0.1
CES	419	0	5	1.9	0.3	414	0	7	0	8.8	0.6
CFC	35	0	0	1.4	-0.4	33	0	0	0	6.2	2.0
CFG	760	1	6	1.5	0.1	649	1	6	0	9.7	0.4
CFY	131	0	0	1.1	-0.4	125	0	1	0	4.4	1.2
CGF	231	0	0	1.2	-0.4	222	0	0	0	3.6	0.4
CGH	362	0	2	1.1	-0.2	336	0	2	0	3.5	0.5
CKK	136	1	9	1.8	0.4	139	0	11	0	9.9	0.5
CKS	402	1	35	1.7	0.1	339	0	38	0	7.4	-0.5
CLX	338	0	8	1.8	-0.2	168	0	10	0	10.0	0.2
CNJ	36058	0	73	1.1	0.4	36058	0	73	0	4.5	0.3
COA	5496	0	8	1.7	0.3	5295	0	5	0	4.8	0.6
CRL	122	0	3	1.3	0.0	116	1	4	0	7.8	-0.2
CSD	37	0	3	2.4	1.5	20	0	5	0	12.0	-0.9
CSN	105	0	5	1.3	0.2	107	0	7	0	9.9	0.5
CUB	260	0	4	1.8	-0.5	229	0	7	0	10.1	0.0
DAB	1498	0	5	1.4	-0.1	1427	0	4	0	4.2	0.3
DAI	1102	0	11	1.3	0.3	1050	0	11	0	4.1	0.8
DAL	3846	0	33	1.4	0.5	3746	0	33	0	5.3	0.2
DLH	6400	0	8	1.3	0.1	6237	0	8	0	4.8	0.4
DRD	454	1	4	1.6	-0.2	453	0	5	0	8.2	0.6
EDW	88	0	5	1.5	-0.3	83	1	7	0	11.6	0.6
EEZ	109	3	16	2.6	0.1	104	2	6	0	8.2	0.2
EIA	329	1	18	2.4	0.2	309	1	100	0	14.1	1.8
ELY	356	0	2	1.2	0.1	327	1	2	0	5.1	0.6
ESS	59	3	10	2.2	1.2	22	0	5	0	4.6	0.7
ETH	23	0	9	2.3	-0.5	21	0	0	0	5.9	1.4
EVA	209	0	3	1.5	0.2	228	0	5	0	7.5	-0.1

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
FCA	252	1	100	3.1	1.5	190	0	7	0	8.5	-0.5
FDX	1923	1	48	1.4	0.3	1592	0	50	0	5.9	0.2
FGI	326	0	3	1.2	-0.1	306	0	3	0	4.4	0.2
FGL	74	0	0	1.2	0.3	73	0	0	0	4.1	0.2
FGN	30	0	3	1.0	-0.1	29	0	3	0	4.7	1.6
FGS	520	0	3	1.3	0.3	484	0	3	0	4.3	0.7
FGZ	79	0	4	1.2	-0.1	74	0	5	0	3.8	0.7
FIN	163	1	6	1.5	0.1	112	1	4	0	6.9	-0.2
FJI	870	5	39	1.6	0.6	857	0	32	0	7.4	0.1
FOM	835	0	24	1.6	-0.3	835	0	24	0	6.6	0.4
FWI	460	0	7	1.5	0.0	451	0	4	0	7.6	0.6
GCO	93	0	12	2.2	0.0	88	1	100	0	11.1	-0.2
GOJ	162	0	2	1.2	0.2	146	0	3	0	4.0	0.6
GRL	71	0	3	1.1	0.2	65	0	3	0	3.9	0.7
GTI	279	1	63	1.7	0.4	247	0	11	0	9.3	-1.0
GVA	29	0	7	1.1	-0.3	27	0	7	0	4.4	-0.1
GVB	55	0	5	1.1	0.2	51	0	6	0	4.5	0.5
GVF	129	0	2	1.5	-0.5	120	0	1	0	4.1	0.3
GVG	31	0	10	1.5	-1.0	30	0	7	0	4.7	0.0
GVH	59	0	5	1.0	-0.3	53	0	6	0	4.3	0.7
GVL	44	0	2	1.2	-0.1	43	0	2	0	5.5	1.1
GVM	24	0	8	1.0	0.0	23	0	9	0	3.8	-0.1
GVR	189	0	4	1.1	-0.2	177	0	3	0	3.9	0.1
GVT	35	0	3	1.3	-0.2	33	0	3	0	4.4	0.7
GVW	101	0	2	1.1	-0.2	95	0	2	0	3.4	0.0
GVX	46	0	2	1.0	0.3	44	0	2	0	3.6	0.3
GWW	132	0	2	1.2	-0.2	125	0	2	0	3.8	0.5
HAL	4244	1	46	2.2	1.1	4173	0	42	0	6.0	0.1
HBI	215	0	7	1.2	-0.3	212	0	6	0	5.1	0.5
HBJ	93	0	1	1.3	-0.3	86	0	1	0	4.4	0.8
HMY	32	3	53	2.4	-0.4	30	0	50	0	9.3	3.9
IBE	4146	1	6	1.6	0.4	4030	0	5	0	8.2	0.4
ICE	1045	0	10	1.6	-0.1	615	0	3	0	6.3	0.2
IWD	738	1	3	1.4	-0.1	736	0	4	0	7.3	0.6
JAL	1222	0	4	1.7	0.4	1202	0	5	0	7.6	0.0
JAZ	1520	0	3	1.4	0.8	1497	0	4	0	6.6	0.7
JBU	60	5	5	0.6	0.3	67	0	0	0	5.3	1.3
KAC	165	0	4	1.3	0.7	158	0	3	0	4.0	0.2
KAL	1412	0	7	1.8	0.3	1411	0	7	0	7.7	-0.2
KIW	26	0	27	1.4	-0.6	26	0	27	0	5.2	-0.9
KLM	1389	0	11	1.4	0.0	1204	0	13	0	7.7	0.6
LAN	637	0	2	1.5	-0.4	632	0	2	0	4.6	0.3
LNE	130	2	7	2.0	0.0	129	0	5	0	9.3	0.4
LNR	374	0	36	1.2	-0.2	357	0	36	0	3.6	0.6
LOB	21	0	24	1.4	-1.1	23	0	22	0	6.4	1.1
LOT	236	0	8	2.0	-0.9	125	0	8	0	10.5	-1.1
LTU	813	1	6	1.7	0.2	649	0	4	0	7.7	0.5
LVG	180	1	7	1.5	0.5	168	0	7	0	6.5	1.9
LXR	63	0	2	1.0	0.0	57	0	2	0	5.4	0.2
MAS	335	1	8	1.7	0.0	312	1	8	0	8.1	0.4
MPD	567	2	4	1.8	0.6	526	0	6	0	9.6	0.8
MPH	633	0	6	1.9	-0.6	484	0	8	0	10.2	0.3
MSR	76	0	0	1.5	0.8	72	0	0	0	4.6	0.2
MXA	47	6	13	1.6	-0.1	45	0	20	0	16.5	2.4
MYT	319	2	6	1.6	0.1	227	0	8	0	9.7	0.7
NAO	84	0	10	1.6	0.6	70	0	11	0	7.3	1.4
NCA	1033	0	5	1.8	0.4	795	1	6	0	7.6	-0.2
NWA	8502	1	16	1.6	0.0	8155	0	16	0	7.4	0.3
NZL	7064	0	10	1.3	-0.1	7062	0	9	0	4.8	0.5

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
OAE	430	0	28	1.4	-0.4	323	0	38	0	8.8	-0.3
OOM	142	1	10	2.2	0.0	87	0	9	0	8.4	0.3
OYK	648	0	40	1.2	-0.3	620	0	40	0	4.0	0.6
PAC	207	0	7	1.7	-0.3	180	1	6	0	6.9	-0.2
PAL	1383	0	8	1.5	0.1	1339	0	10	0	8.8	0.8
PAO	258	0	53	1.5	0.6	257	0	54	0	9.6	0.2
PBI	789	0	39	1.4	0.0	793	1	39	0	6.6	0.7
PLM	386	1	4	1.9	1.1	333	0	5	0	8.6	0.3
QFA	3938	0	44	1.5	0.3	3881	0	44	0	6.5	0.3
RAM	305	1	9	2.0	0.3	232	1	11	0	9.6	0.5
RCH	325	4	100	3.8	-0.4	241	0	100	0	14.3	1.2
RRR	58	2	9	2.2	-0.9	56	0	5	0	10.9	2.0
RYN	139	0	37	1.0	0.1	135	0	39	0	5.0	-0.4
RZO	779	2	6	1.9	-0.1	756	1	5	0	7.8	0.6
SAA	138	1	4	1.3	-0.5	134	0	4	0	7.9	-0.2
SAS	1111	0	44	1.2	0.0	1055	0	44	0	3.9	0.4
SER	408	0	42	1.5	0.4	376	0	43	0	4.3	0.6
SEU	183	1	12	1.7	0.2	155	1	13	0	10.8	1.2
SIA	745	0	3	1.4	0.3	736	0	3	0	4.6	0.6
SLM	95	0	5	1.0	0.0	95	0	8	0	9.1	0.5
SOO	36	6	8	2.1	1.1	49	0	4	0	8.0	1.5
SQC	387	0	1	1.3	0.1	385	0	1	0	4.8	-0.2
SVH	360	0	6	1.1	0.9	359	0	6	0	3.7	-0.6
SWR	1640	0	3	1.2	-0.2	1594	0	3	0	4.5	0.8
TAP	831	0	3	1.5	-0.4	774	0	4	0	7.7	0.5
TCV	49	2	2	3.3	3.2	48	0	2	0	7.7	1.1
TCX	359	1	5	1.3	0.2	307	0	2	0	5.5	0.8
TFL	194	1	7	1.6	-0.4	158	2	9	0	10.0	0.0
THA	120	0	2	1.6	0.3	120	0	1	0	4.8	0.2
THT	1419	0	17	1.1	0.4	1210	0	17	0	5.6	0.8
TPA	36	0	8	1.5	0.5	34	0	6	0	9.0	0.3
TSC	296	1	4	1.5	-0.3	174	0	2	0	7.2	0.1
TUB	65	6	22	3.5	1.2	24	0	13	0	10.6	1.1
UAE	926	0	6	1.5	0.5	906	0	5	0	4.9	0.4
UAL	12672	0	32	1.2	-0.1	12668	0	32	0	5.4	0.5
UPS	1799	1	59	1.8	0.0	1655	0	58	0	6.2	0.3
USA	1790	0	3	1.2	0.0	1730	0	4	0	4.6	0.6
VIR	2620	0	3	1.2	-0.2	2519	0	3	0	4.6	0.4
VRG	40	5	35	2.4	1.3	41	2	37	0	10.0	-0.4
VVJ	36	6	28	1.8	0.3	36	0	25	0	8.7	0.1
VVR	43	2	35	2.6	0.4	45	0	31	0	8.7	0.7
WOA	363	2	12	1.5	0.2	310	0	14	0	8.5	0.6
XLA	217	0	6	1.2	-0.1	176	0	6	0	9.4	0.1
YSS	146	1	5	1.0	-0.1	133	0	5	0	6.6	0.4
ZKN	121	0	2	1.2	-0.1	113	0	3	0	4.1	0.3
ZKS	46	0	2	1.4	-0.5	44	0	2	0	3.3	1.0
9VS	99	0	6	1.1	0.1	94	0	5	0	3.9	0.2

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
AU	49199	0	18	1.4	0.7	49197	0	17	0	5.1	0.5
B-	16376	5	62	1.7	0.8	12009	1	67	0	5.4	0.1
EU	253227	0	28	1.1	0.4	253207	0	27	0	4.3	0.3
HK	1298	0	6	1.2	0.6	1296	0	6	0	4.7	0.5
JP	65675	0	67	1.5	0.8	65672	0	66	0	4.5	0.2
LN	27	0	41	1.1	-0.6	25	0	40	0	10.1	4.4
MK	860	0	3	1.6	1.4	859	0	3	0	6.3	1.4
SA	5794	0	6	1.0	0.5	5793	0	6	0	5.4	0.4
TN	31	0	26	1.8	1.1	29	0	28	0	7.0	0.9
UA	318335	0	99	1.1	-0.2	317905	0	99	0	4.4	0.5

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
N	6378	4	18	1.5	0.0	5726	0	15	0	4.7	0.6
S	35	0	0	1.0	-0.1	35	0	0	0	4.3	-0.1
US AMDAR	1146994	0	67	1.2	0.3	1146982	0	68	0	4.8	0.5

TABLE 4B

MONTHLY MONITORING OF AIRCRAFT OBSERVATIONS
MONITORING CENTRE: EXETER
MONTH: Oct 05

Monitoring procedures

Period :One calendar month.

Data monitored :Statistics for each airline carrier.

Area monitored :90°N - 90°S, 180°W - 180°E.

Standard of comparison :Background field from UKMO global model.

Observation times :All hours combined.

Level(s) monitored :1000.0 – 300.1 hPa

Elements monitored :TEMP in °C ; WIND in m s^{-1}

Parameters monitored

:N REP. :Number of observations received excluding duplicates.

:PG :Percentage of observations with gross errors.

:PR :Percentage of observations rejected by quality control including rejections from the duplicate check.

:PC :Percentage of observations with calm winds.

:RMS :Root Mean Square difference of observations from background values excluding those with gross errors in Temperature & vector wind.

:BIAS :Mean difference of observations from background values excluding those with gross errors in Temperature & Wind Speed.

GROSS ERROR LIMITS :10.0 °C ; 60 m s^{-1} Vector Wind

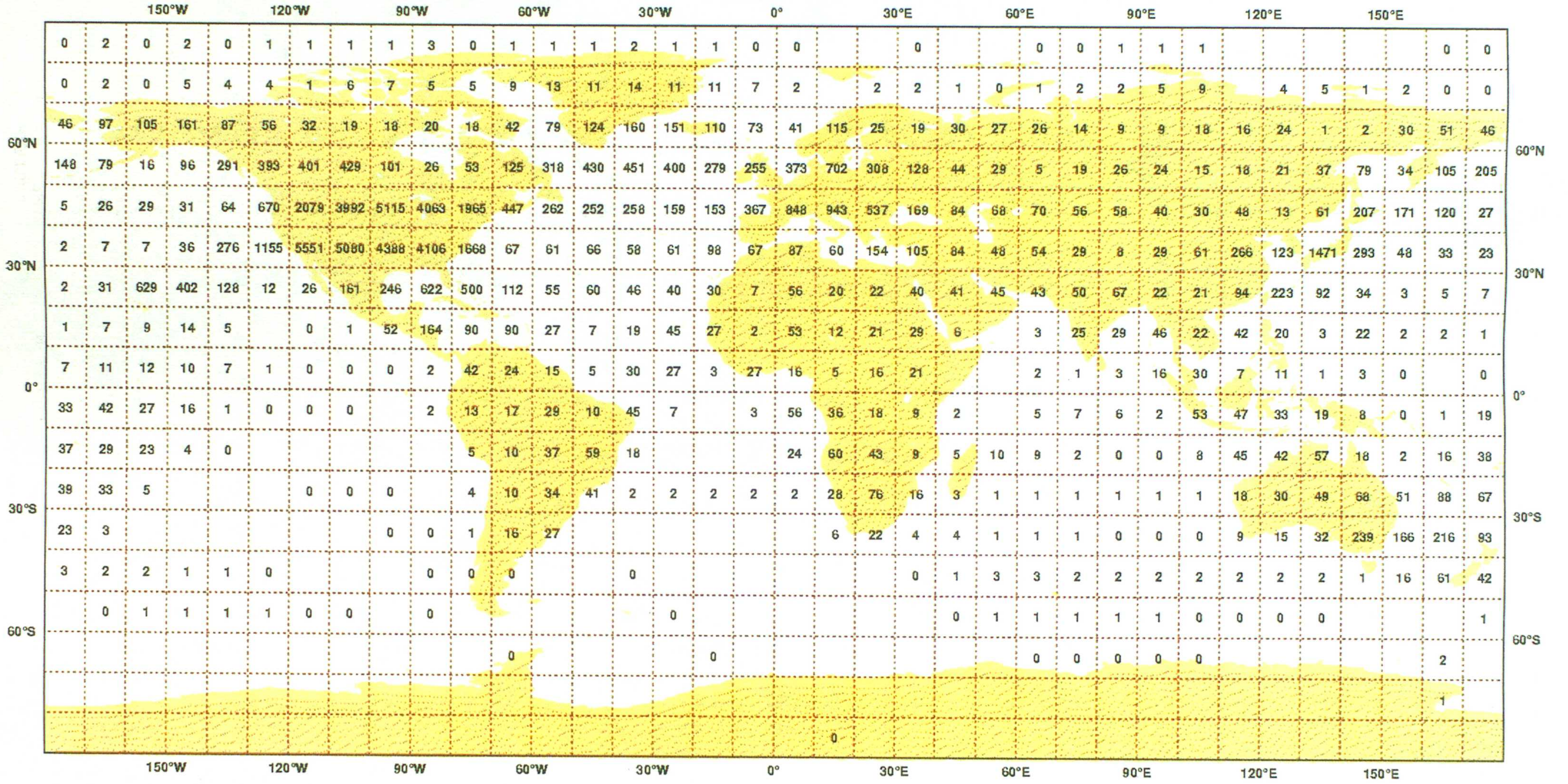
SELECTION CRITERIA :N REP ≥ 20

NB: All American ACARS data are grouped together and statistics are shown at the bottom of the table as "US ACARS".

		TEMPERATURE						WIND			
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
AAL	68	0	22	1.3	-0.3	59	0	24	0	4.5	-0.1
ACA	51	4	22	1.1	0.0	47	0	21	0	9.1	-0.1
AFR	59	2	10	1.9	-0.7	55	0	4	0	5.6	-0.8
AFZ	12684	0	62	1.5	-0.2	12684	0	64	0	4.5	0.2
AMT	54	0	28	1.0	0.4	52	0	27	0	5.2	1.7
ANZ	199	4	16	1.1	0.0	200	0	15	0	6.6	0.7
AXF	35	0	69	3.0	-0.4	35	0	66	0	7.1	4.3
BAL	29	0	3	1.1	-0.2	27	0	4	0	5.3	-0.4
CCA	26	4	54	2.6	-0.9	26	0	100	0	12.9	0.2
CFC	55	2	11	1.4	0.3	35	3	14	0	11.7	1.4
CKS	76	0	21	1.3	0.2	52	0	35	0	9.2	0.5
CNJ	657069	0	85	1.6	0.5	657069	0	85	0	5.2	-0.1
COA	56	0	7	1.4	0.1	56	0	7	0	5.2	1.7
DAL	58	2	40	1.2	0.5	49	0	41	0	4.0	1.1
DLH	147	0	16	1.5	-0.1	136	1	21	0	9.4	1.3
FDX	314	0	35	1.4	0.2	197	0	35	0	7.3	0.4
GCO	67	0	7	1.6	-0.2	63	0	100	0	16.2	5.1
GTI	23	0	74	1.2	0.0	22	0	0	0	6.1	0.5
HAL	448	2	48	1.9	0.7	431	0	45	0	6.0	1.7
ICE	92	2	9	2.0	-0.3	56	0	4	0	7.4	-1.5
JAL	47	2	6	1.2	0.1	46	0	9	0	7.4	1.4
KAL	53	0	8	1.2	0.0	55	0	13	0	5.9	0.2
KLM	41	2	7	1.6	0.2	27	0	15	0	14.2	0.6
LAN	49	0	4	0.9	-0.1	50	0	4	0	3.8	0.0
MAS	50	4	32	0.8	-0.3	49	0	29	0	3.6	1.7
MPH	67	1	4	1.3	0.1	41	0	7	0	10.5	1.7
NCA	56	0	2	1.3	0.0	48	0	2	0	10.4	2.5
NWA	207	2	15	1.5	0.0	196	1	15	0	9.5	-1.0
NZL	26353	0	56	1.0	0.2	26351	0	56	0	4.2	0.2
OAE	41	0	15	0.9	-0.2	22	0	27	0	12.3	0.9
OCE	27	4	15	2.5	2.0	27	0	15	0	7.4	-0.1
PAC	36	3	6	1.8	-0.9	26	0	8	0	5.1	-0.3
QFA	99	1	47	1.7	0.1	101	0	46	0	5.7	0.6
RCH	32	0	100	2.9	-0.5	25	0	100	0	10.5	-2.2
RRR	39	0	36	4.3	3.0	40	0	8	0	10.3	-0.7
SFR	26	0	15	2.7	1.5	27	0	0	0	8.4	1.7
SIA	52	0	0	1.0	0.5	52	0	4	0	3.7	0.7
SKI	29	0	62	3.3	-0.7	53	2	40	0	15.3	-2.3
SVH	24012	0	60	1.5	0.9	24012	0	60	0	3.8	0.5
THT	202	0	55	0.7	0.0	129	0	54	0	5.2	0.3
UAE	78	0	3	1.0	0.6	78	0	3	0	3.4	-0.2
UAL	146	6	31	1.5	-0.3	150	0	26	0	7.2	0.4
UPS	113	1	54	1.3	-0.1	108	2	56	0	7.6	0.0
VVR	22	0	32	2.1	0.1	23	0	35	0	4.2	0.2
WOA	124	0	2	1.2	0.3	76	0	30	0	15.4	2.1

		TEMPERATURE						WIND			
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
AU	56591	0	63	1.4	0.6	56596	0	62	0	4.5	0.2
B-	86371	0	73	1.3	0.4	83259	0	76	0	4.3	0.1
EU	670483	0	67	1.0	0.2	666542	0	67	0	3.7	0.1
HK	2985	0	84	1.3	0.3	2985	0	84	0	4.0	-0.5
JP	275155	0	82	1.2	0.3	275155	0	82	0	4.1	0.5
MK	1125	0	49	1.1	0.4	1124	0	49	0	4.4	0.9
SA	3909	0	62	1.6	0.3	3909	0	62	0	4.9	-0.1
UA	256691	0	99	1.0	-0.2	256213	0	99	0	3.8	0.4
N	68	41	66	4.4	1.9	23	0	39	0	18.3	8.0
US AMDAR	1820528	0	81	1.1	0.2	1815945	0	82	0	3.9	0.3

Figure 3a. AIRCRAFT 300 - 150 hPa mean daily count. OCTOBER 2005
Observations with O-B vector difference greater than 60 ms-1 excluded
Global average number of observations in 24 hours = 65896



0	2	0	2	0	1	1	1	1	3	0	1	1	1	2	1	1	0	0			0			0	0	1	1	1						0	0
0	2	0	5	4	4	1	6	7	5	5	9	13	11	14	11	11	7	2		2	2	1	0	1	2	2	5	9		4	5	1	2	0	0
46	97	105	161	87	56	32	19	18	20	18	42	79	124	160	151	110	73	41	115	25	19	30	27	26	14	9	9	18	16	24	1	2	30	51	46
148	79	16	96	291	393	401	429	101	26	53	125	318	430	451	400	279	255	373	702	308	128	44	29	5	19	26	24	15	18	21	37	79	34	105	205
5	26	29	31	64	670	2079	3992	5115	4063	1965	447	262	252	258	159	153	367	848	943	537	169	84	68	70	56	58	40	30	48	13	61	207	171	120	27
2	7	7	36	276	1155	5551	5080	4388	4106	1668	67	61	66	58	61	98	67	87	60	154	105	84	48	54	29	8	29	61	266	123	1471	293	48	33	23
2	31	629	402	128	12	26	161	246	622	500	112	55	60	46	40	30	7	56	20	22	40	41	45	43	50	67	22	21	94	223	92	34	3	5	7
1	7	9	14	5		0	1	52	164	90	90	27	7	19	45	27	2	53	12	21	29	6		3	25	29	46	22	42	20	3	22	2	2	1
7	11	12	10	7	1	0	0	0	2	42	24	15	5	30	27	3	27	16	5	16	21			2	1	3	16	30	7	11	1	3	0		0
33	42	27	16	1	0	0	0		2	13	17	29	10	45	7		3	56	36	18	9	2		5	7	6	2	53	47	33	19	8	0	1	19
37	29	23	4	0						5	10	37	59	18				24	60	43	9	5	10	9	2	0	0	8	45	42	57	18	2	16	38
39	33	5				0	0	0		4	10	34	41	2	2	2	2	2	28	76	16	3	1	1	1	1	1	1	18	30	49	68	51	88	67
23	3							0	0	1	16	27							6	22	4	4	1	1	1	0	0	0	9	15	32	239	166	216	93
3	2	2	1	1	0				0	0	0			0							0	1	3	3	2	2	2	2	2	2	2	1	16	61	42
	0	1	1	1	1	0	0		0						0							0	1	1	1	1	1	0	0	0	0				1
											0					0								0	0	0	0	0						2	
																																		1	
																			0																

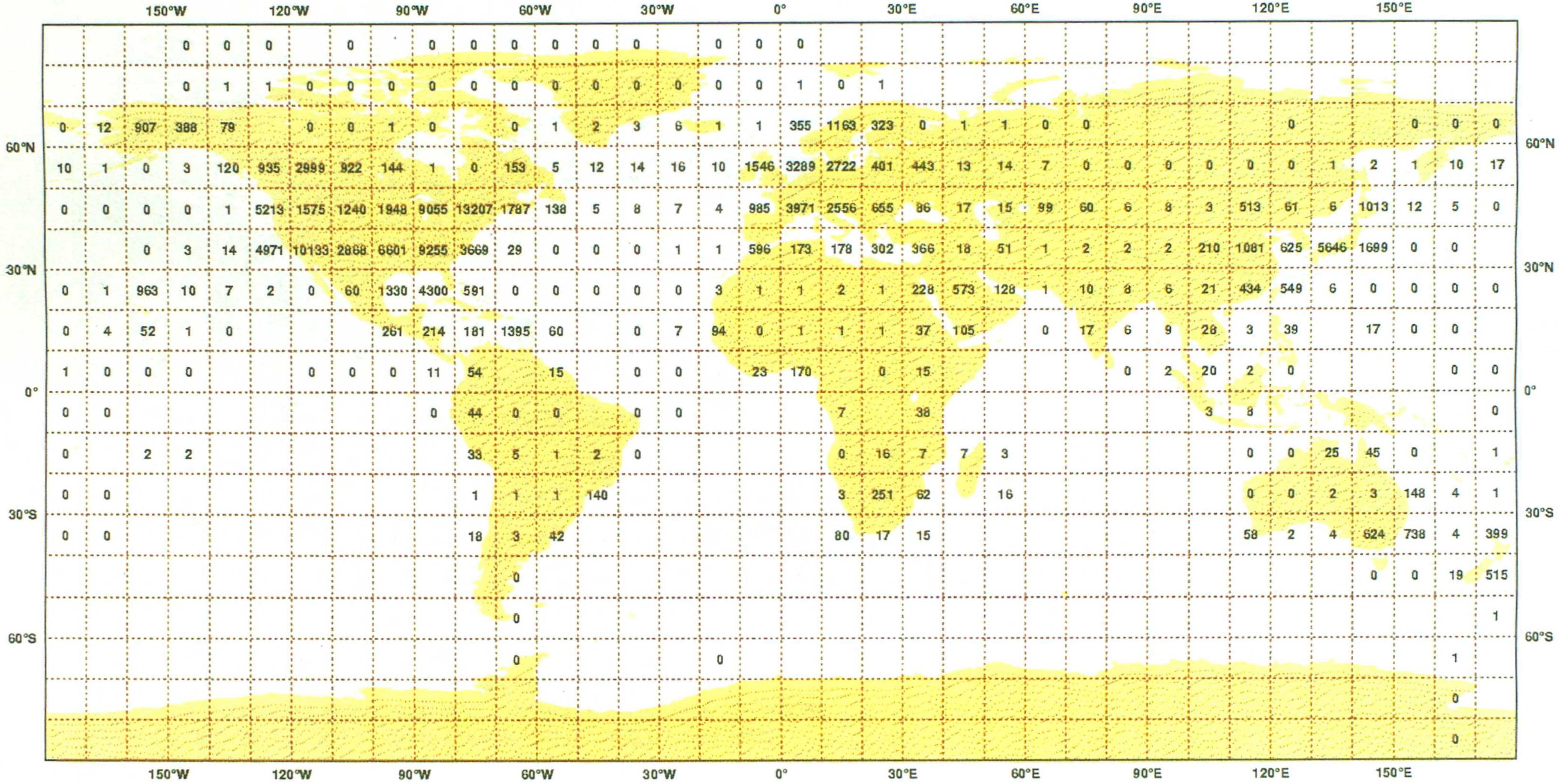

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
0 0 0 0 0 0 0 0 0 0 0 0 0
0 1 1 0 0 0 0 0 0 0 0 0 0 0 1 0 1
0 12 907 388 79 0 0 1 0 0 1 2 3 6 1 1 355 1163 323 0 1 1 0 0 0 0 0 0
10 1 0 3 120 935 2899 922 144 1 0 153 5 12 14 16 10 1546 3289 2722 401 443 13 14 7 0 0 0 0 0 0 1 2 1 10 17
0 0 0 0 1 5213 1575 1240 1948 9055 13207 1787 138 5 8 7 4 985 3971 2556 655 86 17 15 99 60 6 8 3 513 61 6 1013 12 5 0
0 3 14 4971 10133 2868 6601 9255 3669 29 0 0 0 1 1 596 173 178 302 366 18 51 1 2 2 2 210 1081 625 5646 1699 0 0
0 1 963 10 7 2 0 60 1330 4300 591 0 0 0 0 0 3 1 1 2 1 228 573 128 1 10 8 6 21 434 549 6 0 0 0 0
0 4 52 1 0 261 214 181 1395 60 0 7 94 0 1 1 1 37 105 0 17 6 9 28 3 39 17 0 0
1 0 0 0 0 0 0 11 54 15 0 0 23 170 0 15 0 2 20 2 0 0 0
0 0 0 44 0 0 0 0 7 38 3 8 0
0 2 2 33 5 1 2 0 0 16 7 7 3 0 0 25 45 0 1
0 0 1 1 1 140 3 251 62 16 0 0 2 3 148 4 1
0 0 18 3 42 80 17 15 58 2 4 624 738 4 399
0 0 0 19 515
0 1
0 0 1
0
0

Figure 3b. AIRCRAFT 1000 - 301 hPa mean daily count. OCTOBER 2005
Observations with O-B vector difference greater than 60 ms-1 excluded
Global average number of observations in 24 hours = 125319

Figure 4a. AIRCRAFT 300 - 150 hPa mean winds. OCTOBER 2005
Observations with O-B vector difference greater than 60 ms-1 excluded
Arrows are plotted where greater than 30 obs are present

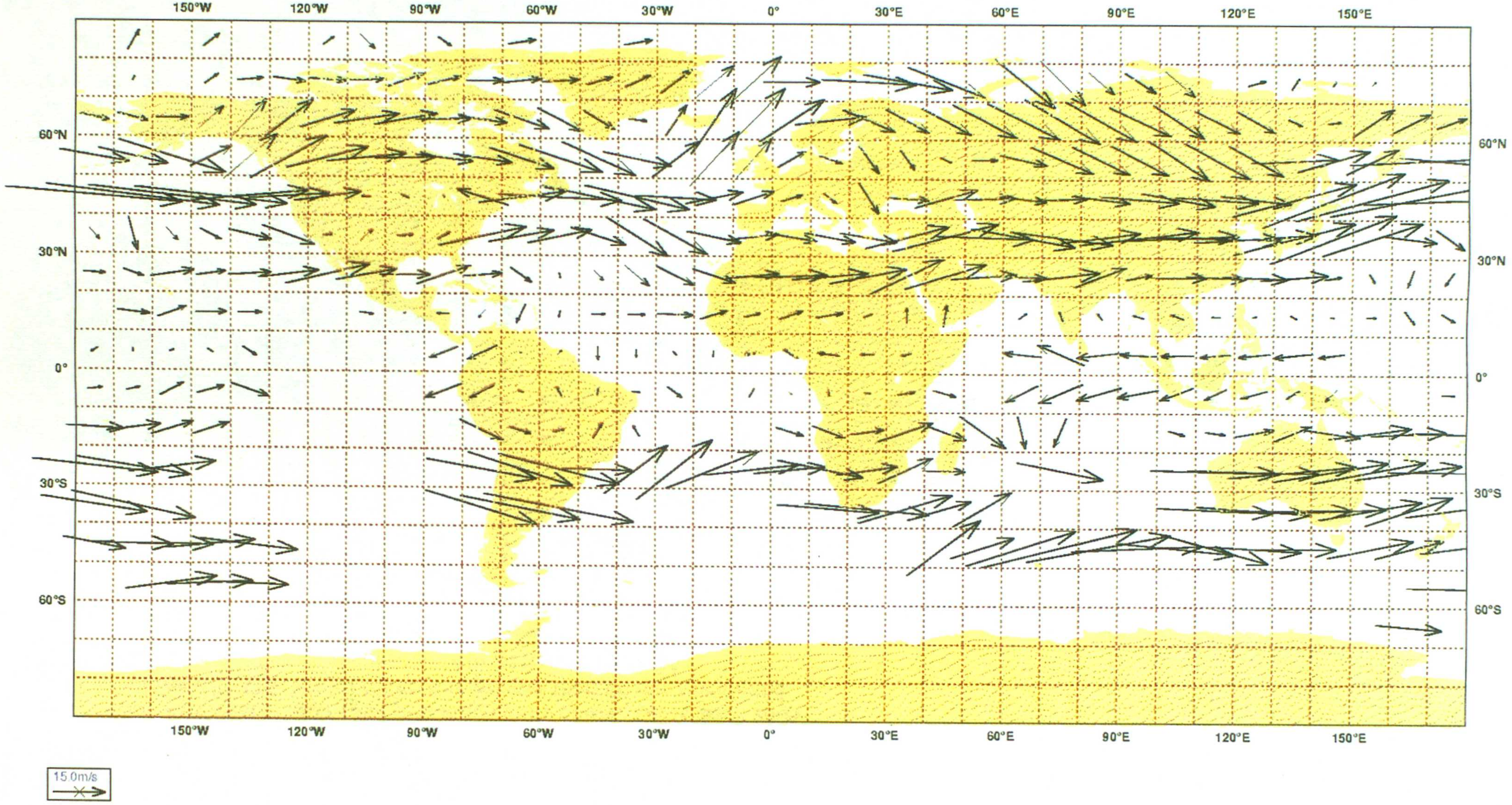

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 4b. AIRCRAFT 1000 - 301 hPa mean winds. OCTOBER 2005
Observations with O-B vector difference greater than 60 ms-1 excluded
Arrows are plotted where greater than 30 obs are present

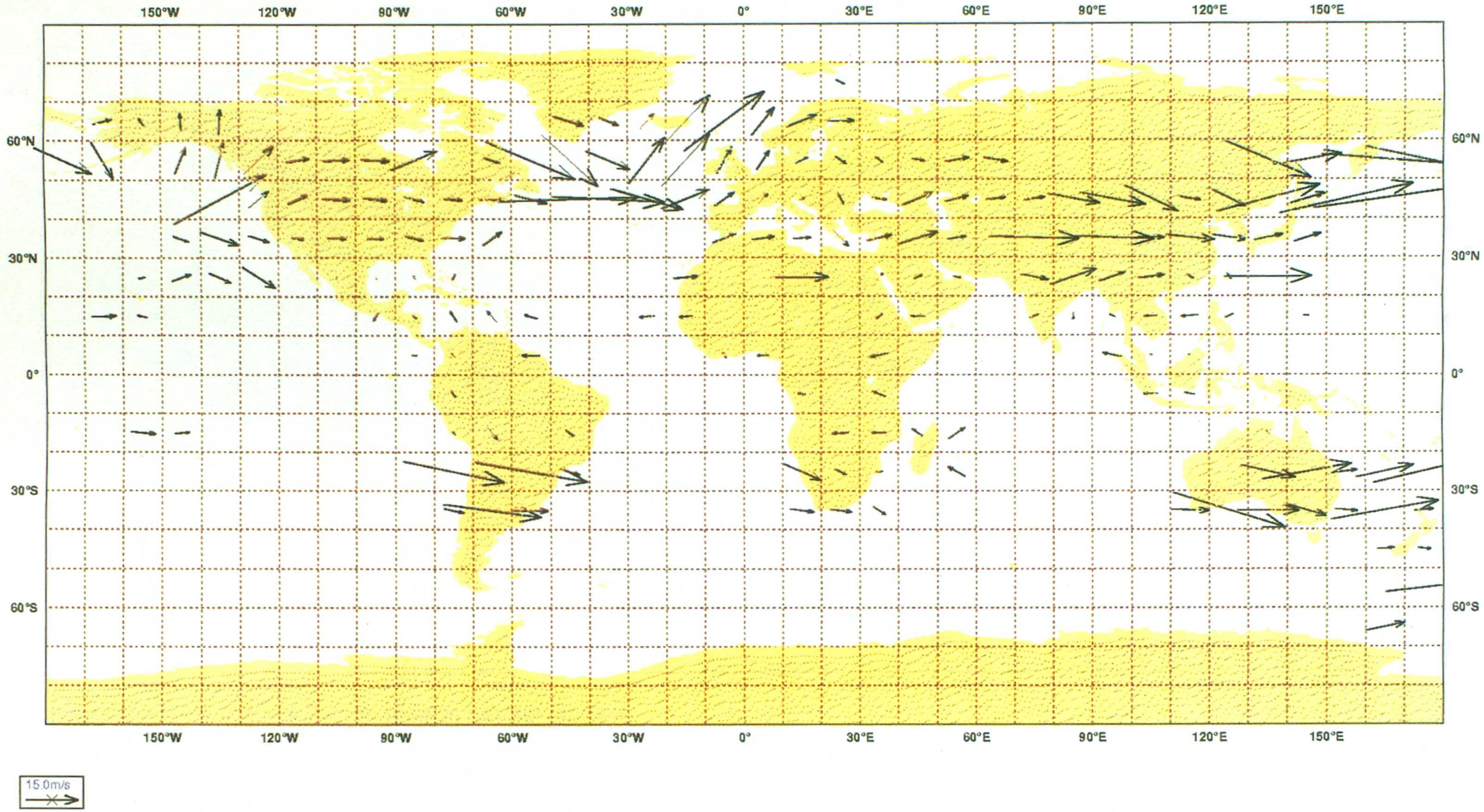

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 5a. AIRCRAFT 300 - 150 hPa mean O-B winds. OCTOBER 2005
Observations with O-B vector difference greater than 60 ms-1 excluded
Arrows are plotted where greater than 30 obs are present

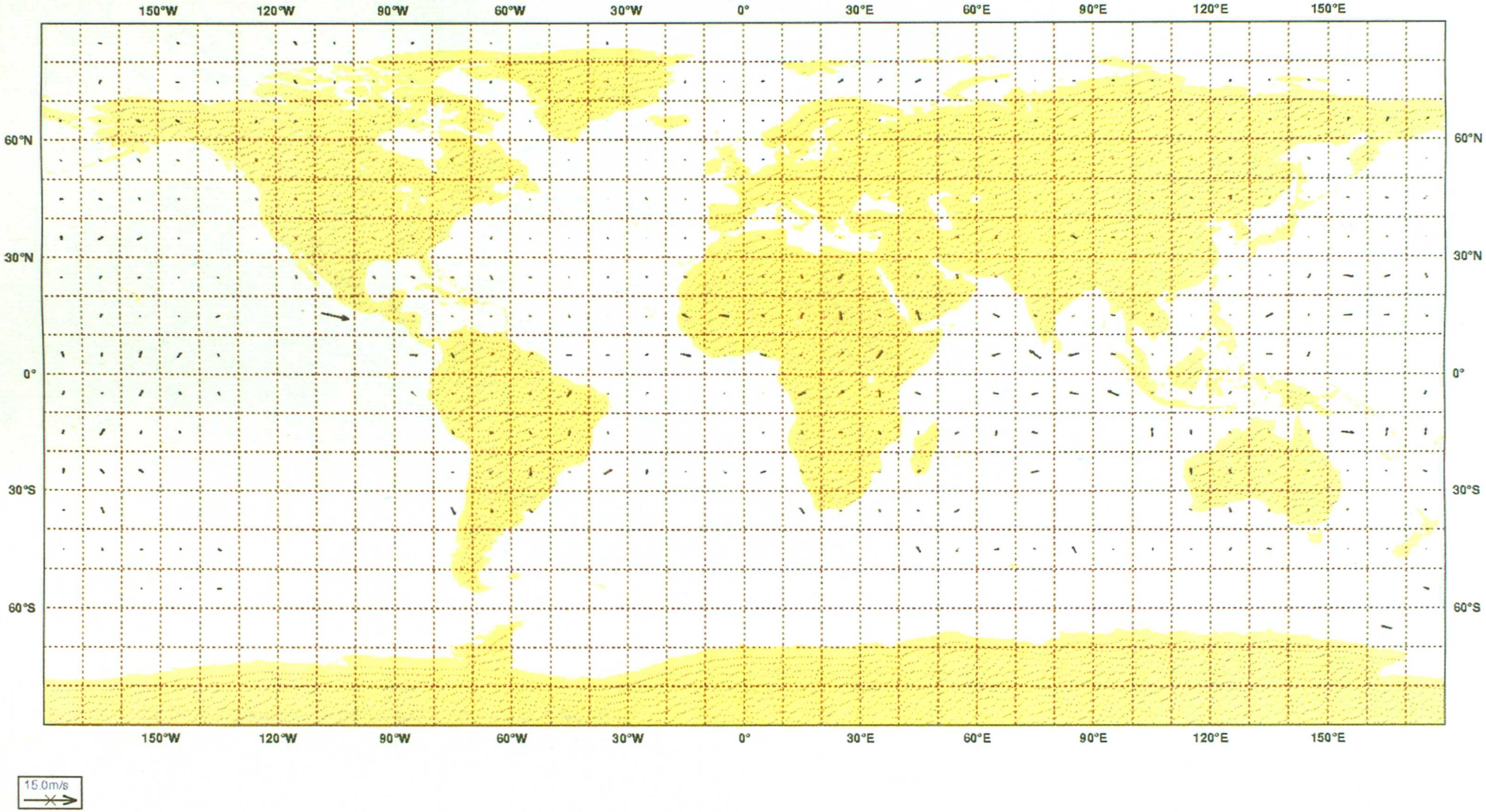

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 5b. AIRCRAFT 1000 - 301 hPa mean O-B winds. OCTOBER 2005
Observations with O-B vector difference greater than 60 ms-1 excluded
Arrows are plotted where greater than 30 obs are present

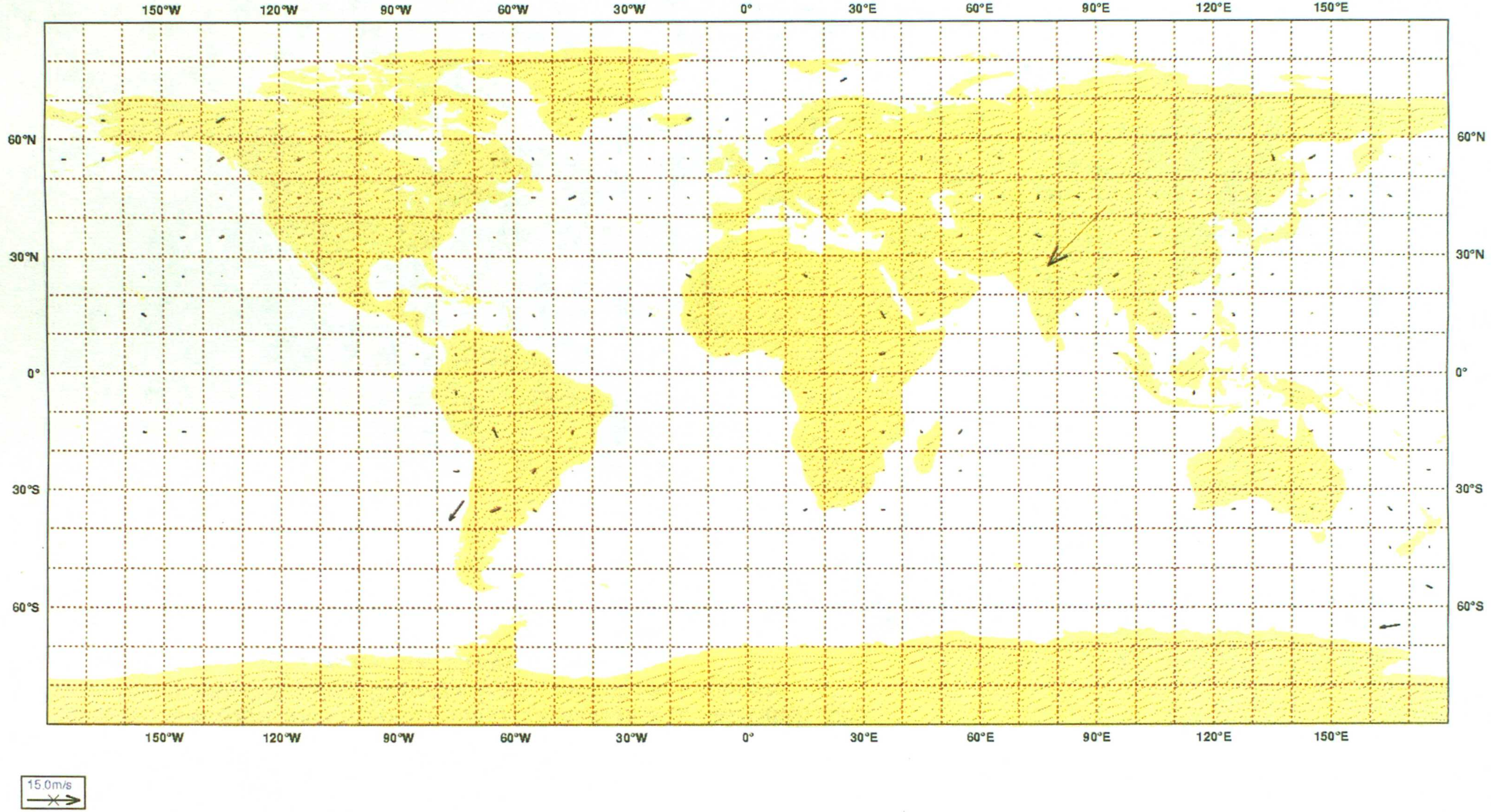

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 6a. AIRCRAFT 300 - 150 hPa mean O-B speeds (ms-1). OCTOBER 2005
Observations with O-B vector difference greater than 60 ms-1 excluded
Values are printed where greater than 30 obs are present

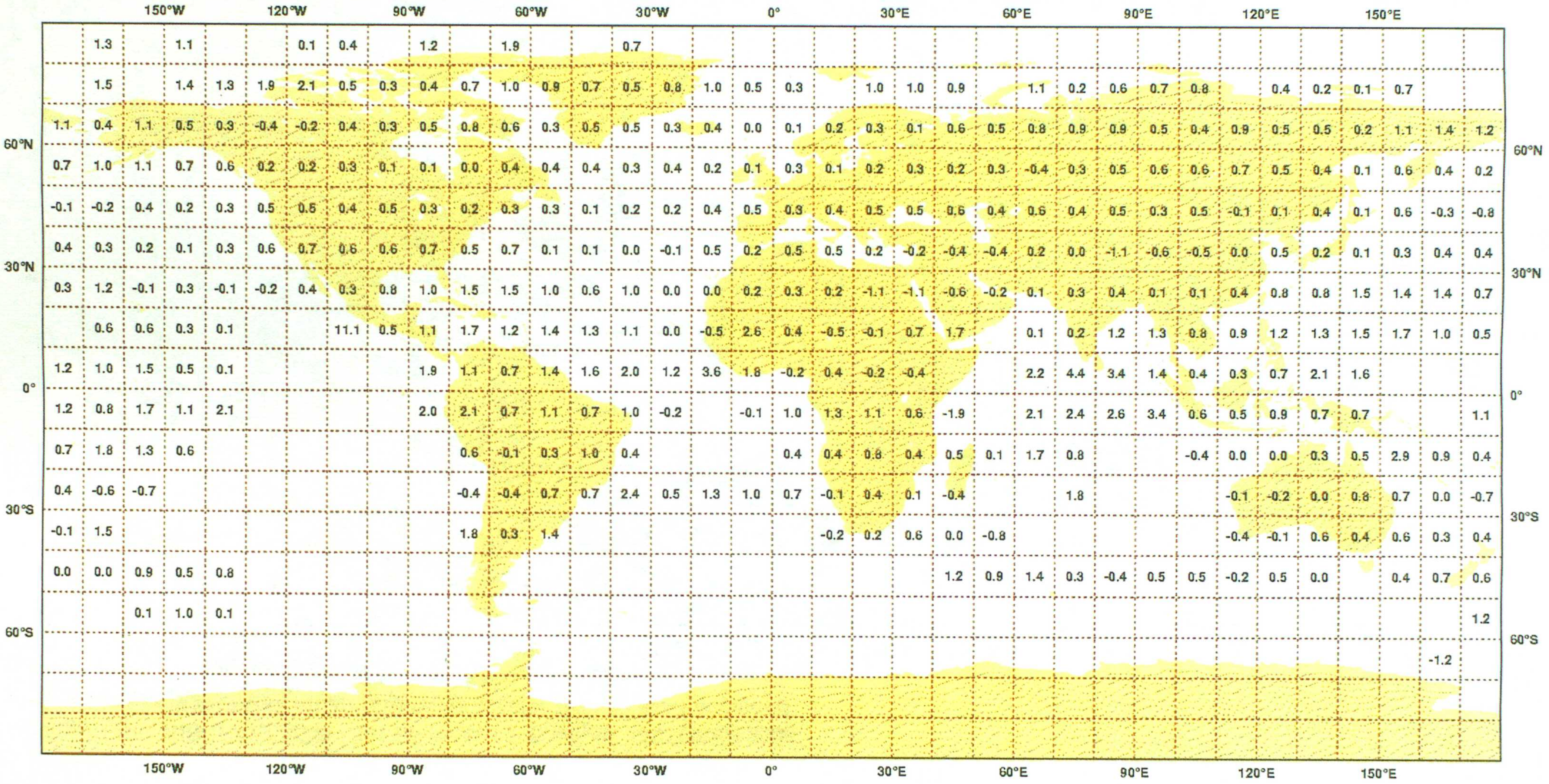

150°W 120°W 90°W 60°W 30°W 0° 30°E 60°E 90°E 120°E 150°E
60°N 30°N 0° 30°S 60°S
1.3 1.1 0.1 0.4 1.2 1.9 0.7
1.5 1.4 1.3 1.9 2.1 0.5 0.3 0.4 0.7 1.0 0.9 0.7 0.5 0.8 1.0 0.5 0.3 1.0 1.0 0.9 1.1 0.2 0.6 0.7 0.8 0.4 0.2 0.1 0.7
1.1 0.4 1.1 0.5 0.3 -0.4 -0.2 0.4 0.3 0.5 0.8 0.6 0.3 0.5 0.5 0.3 0.4 0.0 0.1 0.2 0.3 0.1 0.6 0.5 0.8 0.9 0.9 0.5 0.4 0.9 0.5 0.5 0.2 1.1 1.4 1.2
0.7 1.0 1.1 0.7 0.6 0.2 0.2 0.3 0.1 0.1 0.0 0.4 0.4 0.4 0.3 0.4 0.2 0.1 0.3 0.1 0.2 0.3 0.2 0.3 -0.4 0.3 0.5 0.6 0.6 0.7 0.5 0.4 0.1 0.6 0.4 0.2
-0.1 -0.2 0.4 0.2 0.3 0.5 0.5 0.4 0.5 0.3 0.2 0.3 0.3 0.1 0.2 0.2 0.4 0.5 0.3 0.4 0.5 0.5 0.6 0.4 0.6 0.4 0.5 0.3 0.5 -0.1 0.1 0.4 0.1 0.6 -0.3 -0.8
0.4 0.3 0.2 0.1 0.3 0.6 0.7 0.6 0.6 0.7 0.5 0.7 0.1 0.1 0.0 -0.1 0.5 0.2 0.5 0.5 0.2 -0.2 -0.4 -0.4 0.2 0.0 -1.1 -0.6 -0.5 0.0 0.5 0.2 0.1 0.3 0.4 0.4
0.3 1.2 -0.1 0.3 -0.1 -0.2 0.4 0.3 0.8 1.0 1.5 1.5 1.0 0.6 1.0 0.0 0.0 0.2 0.3 0.2 -1.1 -1.1 -0.6 -0.2 0.1 0.3 0.4 0.1 0.1 0.4 0.8 0.8 1.5 1.4 1.4 0.7
0.6 0.6 0.3 0.1 11.1 0.5 1.1 1.7 1.2 1.4 1.3 1.1 0.0 -0.5 2.6 0.4 -0.5 -0.1 0.7 1.7 0.1 0.2 1.2 1.3 0.8 0.9 1.2 1.3 1.5 1.7 1.0 0.5
1.2 1.0 1.5 0.5 0.1 1.9 1.1 0.7 1.4 1.6 2.0 1.2 3.6 1.8 -0.2 0.4 -0.2 -0.4 2.2 4.4 3.4 1.4 0.4 0.3 0.7 2.1 1.6
1.2 0.8 1.7 1.1 2.1 2.0 2.1 0.7 1.1 0.7 1.0 -0.2 -0.1 1.0 1.3 1.1 0.6 -1.9 2.1 2.4 2.6 3.4 0.6 0.5 0.9 0.7 0.7 1.1
0.7 1.8 1.3 0.6 0.6 -0.1 0.3 1.0 0.4 0.4 0.4 0.8 0.4 0.5 0.1 1.7 0.8 -0.4 0.0 0.0 0.3 0.5 2.9 0.9 0.4
0.4 -0.6 -0.7 -0.4 -0.4 0.7 0.7 2.4 0.5 1.3 1.0 0.7 -0.1 0.4 0.1 -0.4 1.8 -0.1 -0.2 0.0 0.8 0.7 0.0 -0.7
-0.1 1.5 1.8 0.3 1.4 -0.2 0.2 0.6 0.0 -0.8 -0.4 -0.1 0.6 0.4 0.6 0.3 0.4
0.0 0.0 0.9 0.5 0.8 1.2 0.9 1.4 0.3 -0.4 0.5 0.5 -0.2 0.5 0.0 0.4 0.7 0.6
0.1 1.0 0.1 1.2
-1.2

Figure 6b. AIRCRAFT 1000 - 301 hPa mean O-B speeds (ms-1). OCTOBER 2005
Observations with O-B vector difference greater than 60 ms-1 excluded
Values are printed where greater than 30 obs are present

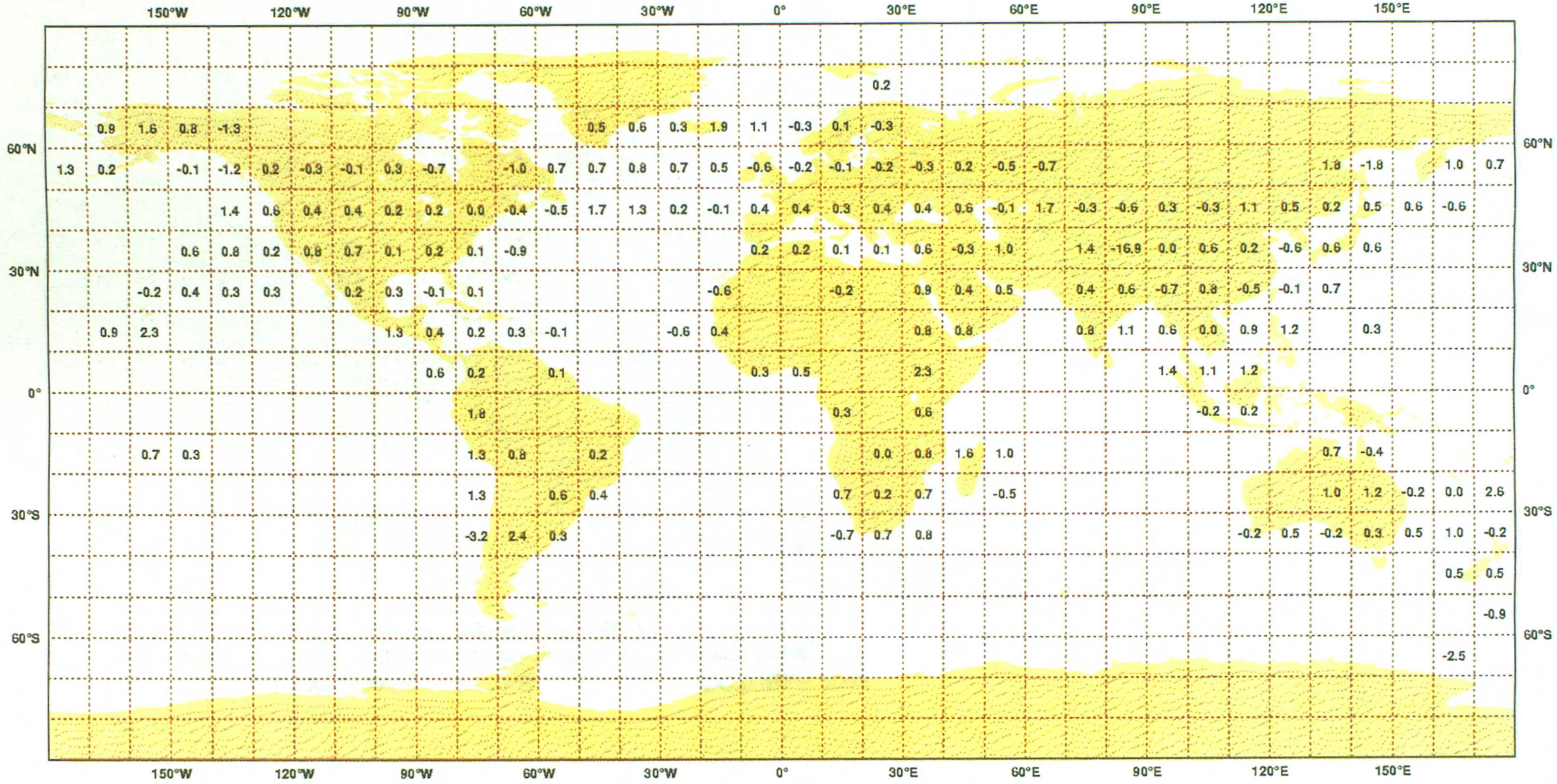
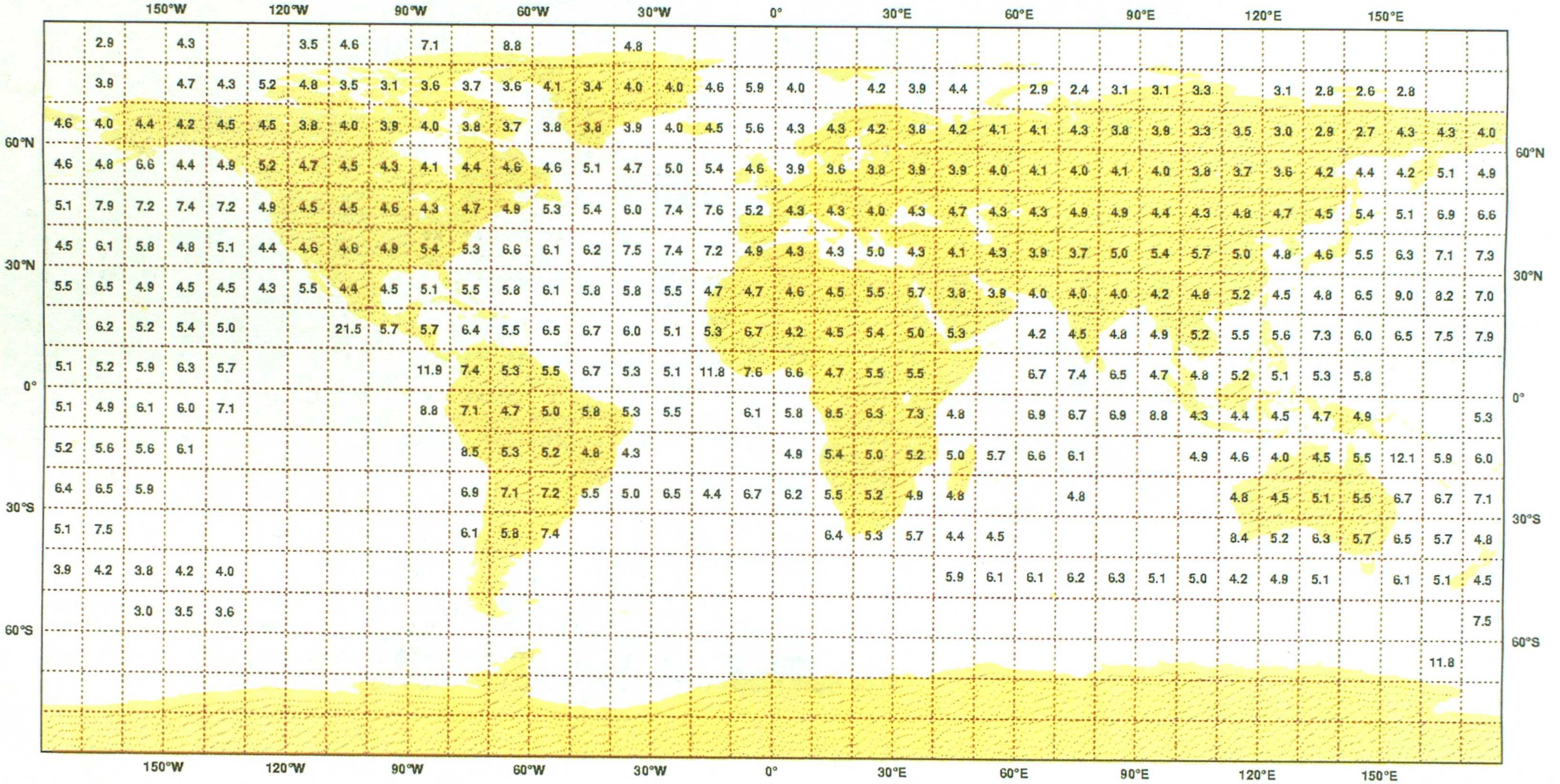

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
0.2
0.9 1.6 0.8 -1.3 0.5 0.6 0.3 1.9 1.1 -0.3 0.1 -0.3
1.3 0.2 -0.1 -1.2 0.2 -0.3 -0.1 0.3 -0.7 -1.0 0.7 0.7 0.8 0.7 0.5 -0.6 -0.2 -0.1 -0.2 -0.3 0.2 -0.5 -0.7 1.8 -1.8 1.0 0.7
1.4 0.6 0.4 0.4 0.2 0.2 0.0 -0.4 -0.5 1.7 1.3 0.2 -0.1 0.4 0.4 0.3 0.4 0.4 0.6 -0.1 1.7 -0.3 -0.6 0.3 -0.3 1.1 0.5 0.2 0.5 0.6 -0.6
0.6 0.8 0.2 0.8 0.7 0.1 0.2 0.1 -0.9 0.2 0.2 0.1 0.1 0.6 -0.3 1.0 1.4 -16.9 0.0 0.6 0.2 -0.6 0.6 0.6
-0.2 0.4 0.3 0.3 0.2 0.3 -0.1 0.1 -0.6 -0.2 0.9 0.4 0.5 0.4 0.6 -0.7 0.8 -0.5 -0.1 0.7
0.9 2.3 1.3 0.4 0.2 0.3 -0.1 -0.6 0.4 0.8 0.8 0.8 1.1 0.6 0.0 0.9 1.2 0.3
0.6 0.2 0.1 0.3 0.5 2.3 1.4 1.1 1.2
1.8 0.3 0.6 -0.2 0.2
0.7 0.3 1.3 0.8 0.2 0.0 0.8 1.6 1.0 0.7 -0.4
1.3 0.6 0.4 0.7 0.2 0.7 -0.5 1.0 1.2 -0.2 0.0 2.6
-3.2 2.4 0.3 -0.7 0.7 0.8 -0.2 0.5 -0.2 0.3 0.5 1.0 -0.2
0.5 0.5
-0.9
-2.5
150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S

Figure 7a. AIRCRAFT 300 - 150 hPa RMS O-B vector (ms-1). OCTOBER 2005
Observations with O-B vector difference greater than 60 ms-1 excluded
Values are printed where greater than 30 obs are present



	2.9		4.3			3.5	4.6		7.1		8.8			4.8																					
	3.9		4.7	4.3	5.2	4.8	3.5	3.1	3.6	3.7	3.6	4.1	3.4	4.0	4.0	4.6	5.9	4.0		4.2	3.9	4.4		2.9	2.4	3.1	3.1	3.3		3.1	2.8	2.6	2.8		
4.6	4.0	4.4	4.2	4.5	4.5	3.8	4.0	3.9	4.0	3.8	3.7	3.8	3.8	3.9	4.0	4.5	5.6	4.3	4.3	4.2	3.8	4.2	4.1	4.1	4.3	3.8	3.9	3.3	3.5	3.0	2.9	2.7	4.3	4.3	4.0
4.6	4.8	6.6	4.4	4.9	5.2	4.7	4.5	4.3	4.1	4.4	4.6	4.6	5.1	4.7	5.0	5.4	4.6	3.9	3.6	3.8	3.9	3.9	4.0	4.1	4.0	4.1	4.0	3.8	3.7	3.6	4.2	4.4	4.2	5.1	4.9
5.1	7.9	7.2	7.4	7.2	4.9	4.5	4.5	4.6	4.3	4.7	4.9	5.3	5.4	6.0	7.4	7.6	5.2	4.3	4.3	4.0	4.3	4.7	4.3	4.3	4.9	4.9	4.4	4.3	4.8	4.7	4.5	5.4	5.1	6.9	6.6
4.5	6.1	5.8	4.8	5.1	4.4	4.6	4.6	4.9	5.4	5.3	6.6	6.1	6.2	7.5	7.4	7.2	4.9	4.3	4.3	5.0	4.3	4.1	4.3	3.9	3.7	5.0	5.4	5.7	5.0	4.8	4.6	5.5	6.3	7.1	7.3
5.5	6.5	4.9	4.5	4.5	4.3	5.5	4.4	4.5	5.1	5.5	5.8	6.1	5.8	5.8	5.5	4.7	4.7	4.6	4.5	5.5	5.7	3.8	3.9	4.0	4.0	4.0	4.2	4.8	5.2	4.5	4.8	6.5	9.0	8.2	7.0
	6.2	5.2	5.4	5.0			21.5	5.7	5.7	6.4	5.5	6.5	6.7	6.0	5.1	5.3	6.7	4.2	4.5	5.4	5.0	5.3		4.2	4.5	4.8	4.9	5.2	5.5	5.6	7.3	6.0	6.5	7.5	7.9
5.1	5.2	5.9	6.3	5.7					11.9	7.4	5.3	5.5	6.7	5.3	5.1	11.8	7.6	6.6	4.7	5.5	5.5			6.7	7.4	6.5	4.7	4.8	5.2	5.1	5.3	5.8			
5.1	4.9	6.1	6.0	7.1					8.8	7.1	4.7	5.0	5.8	5.3	5.5		6.1	5.8	8.5	6.3	7.3	4.8		6.9	6.7	6.9	8.8	4.3	4.4	4.5	4.7	4.9			5.3
5.2	5.6	5.6	6.1							8.5	5.3	5.2	4.8	4.3				4.9	5.4	5.0	5.2	5.0	5.7	6.6	6.1			4.9	4.6	4.0	4.5	5.5	12.1	5.9	6.0
6.4	6.5	5.9								6.9	7.1	7.2	5.5	5.0	6.5	4.4	6.7	6.2	5.5	5.2	4.9	4.8			4.8				4.8	4.5	5.1	5.5	6.7	6.7	7.1
5.1	7.5									6.1	5.8	7.4							6.4	5.3	5.7	4.4	4.5						8.4	5.2	6.3	5.7	6.5	5.7	4.8
3.9	4.2	3.8	4.2	4.0																		5.9	6.1	6.1	6.2	6.3	5.1	5.0	4.2	4.9	5.1		6.1	5.1	4.5
		3.0	3.5	3.6																															7.5
																																		11.8	

Figure 7b. AIRCRAFT 1000 - 301 hPa RMS O-B vector (ms-1). OCTOBER 2005
Observations with O-B vector difference greater than 60 ms-1 excluded
Values are printed where greater than 30 obs are present

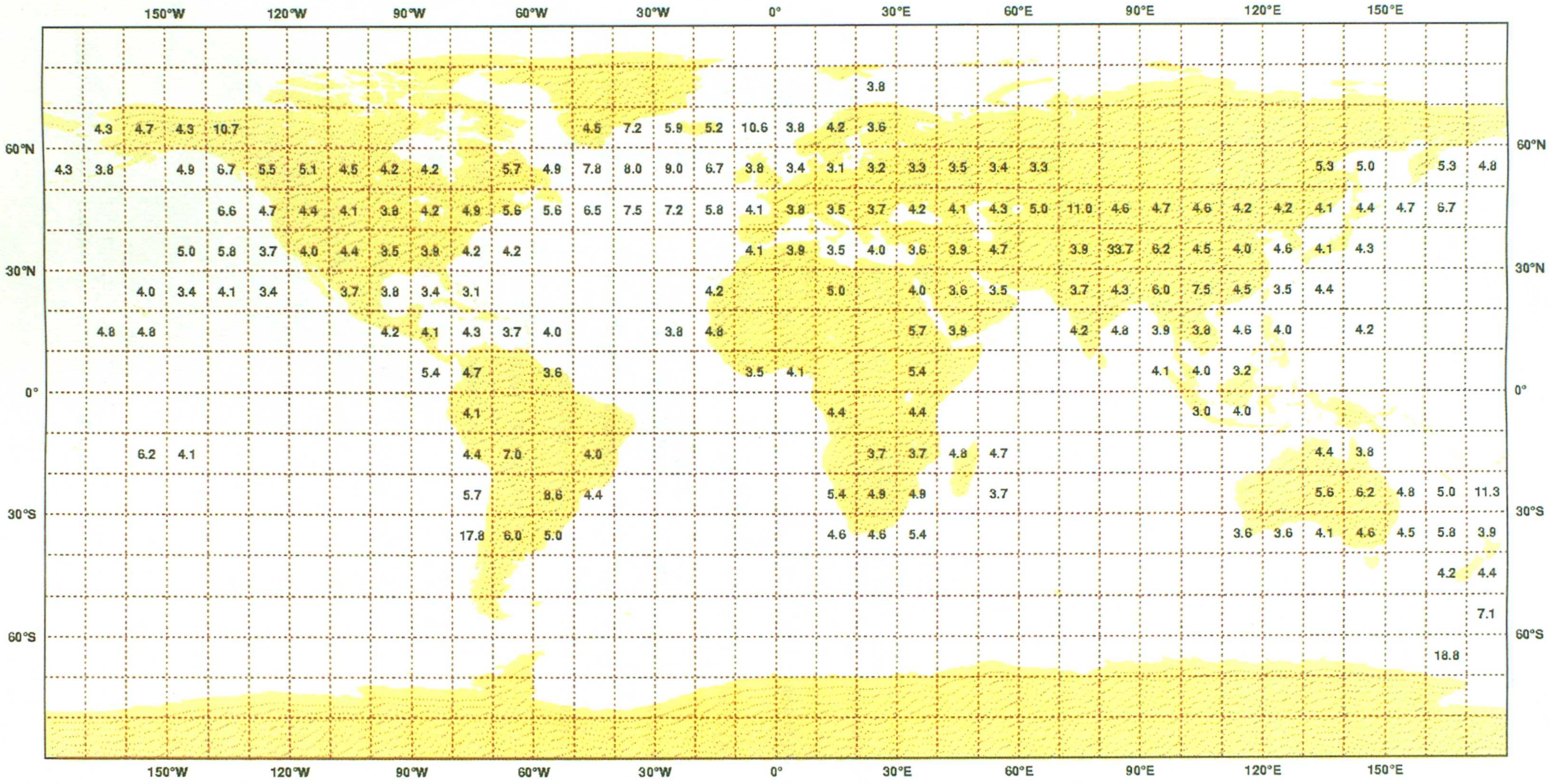

150°W 120°W 90°W 60°W 30°W 0° 30°E 60°E 90°E 120°E 150°E
60°N 30°N 0° 30°S 60°S
3.8
4.3 4.7 4.3 10.7 4.5 7.2 5.9 5.2 10.6 3.8 4.2 3.6
4.3 3.8 4.9 6.7 5.5 5.1 4.5 4.2 4.2 5.7 4.9 7.8 8.0 9.0 6.7 3.8 3.4 3.1 3.2 3.3 3.5 3.4 3.3 5.3 5.0 5.3 4.8
6.6 4.7 4.4 4.1 3.8 4.2 4.9 5.6 5.6 6.5 7.5 7.2 5.8 4.1 3.8 3.5 3.7 4.2 4.1 4.3 5.0 11.0 4.6 4.7 4.6 4.2 4.2 4.1 4.4 4.7 6.7
5.0 5.8 3.7 4.0 4.4 3.5 3.9 4.2 4.2 4.1 3.9 3.5 4.0 3.6 3.9 4.7 3.9 33.7 6.2 4.5 4.0 4.6 4.1 4.3
4.0 3.4 4.1 3.4 3.7 3.8 3.4 3.1 4.2 5.0 4.0 3.6 3.5 3.7 4.3 6.0 7.5 4.5 3.5 4.4
4.8 4.8 4.2 4.1 4.3 3.7 4.0 3.8 4.8 5.7 3.9 4.2 4.8 3.9 3.8 4.6 4.0 4.2
5.4 4.7 3.6 3.5 4.1 5.4 4.1 4.0 3.2
4.1 4.4 4.4 3.0 4.0
6.2 4.1 4.4 7.0 4.0 3.7 3.7 4.8 4.7 4.4 3.8
5.7 8.6 4.4 5.4 4.9 4.9 3.7 5.6 6.2 4.8 5.0 11.3
17.8 6.0 5.0 4.6 4.6 5.4 3.6 3.6 4.1 4.6 4.5 5.8 3.9
4.2 4.4
7.1
18.8

TABLE 5

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS
MONITORING CENTRE: EXETER
MONTH: Oct 05

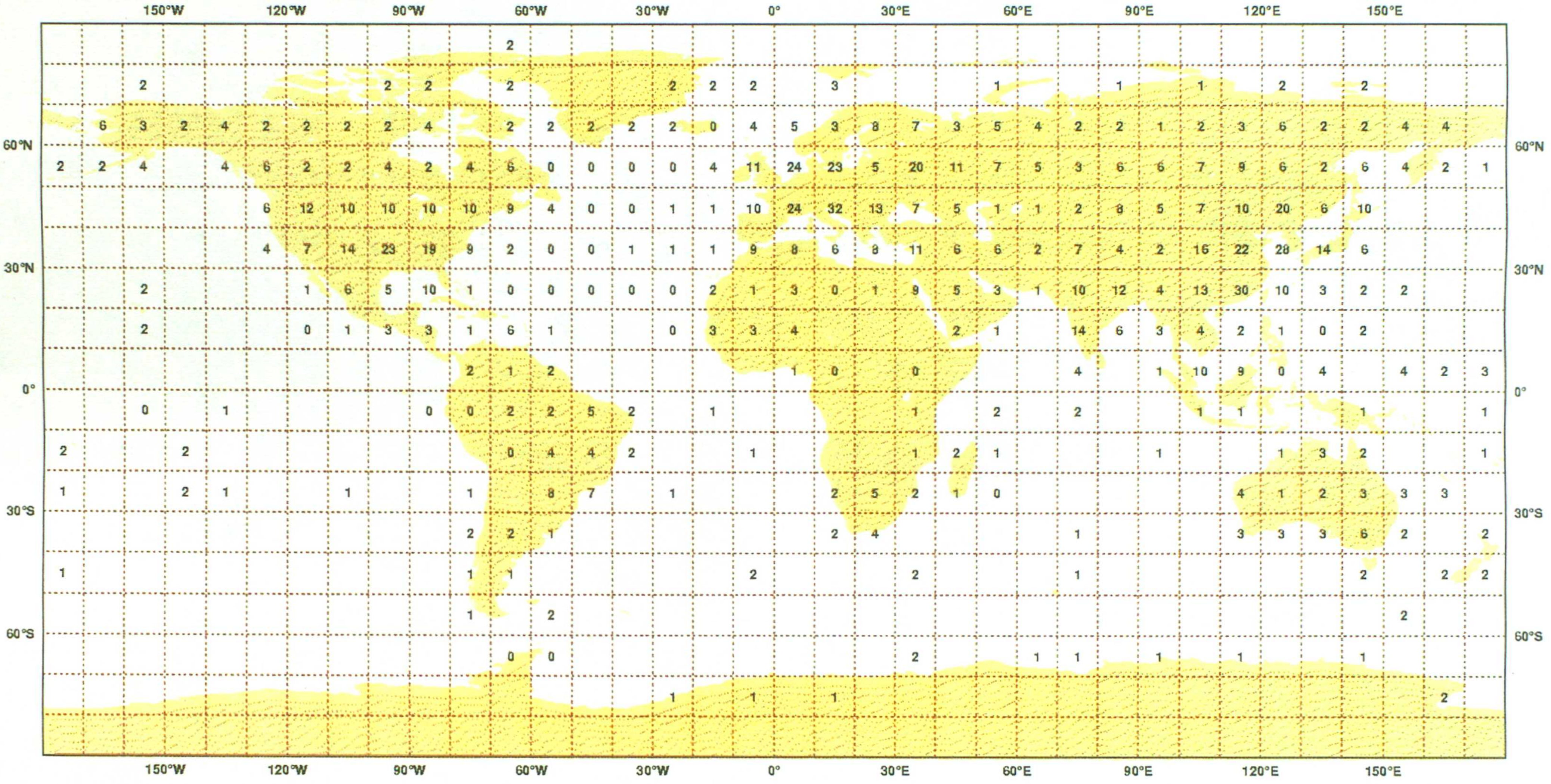
Monitoring procedures

Period		:One calendar month.
Data monitored		:Reports from each unique identifier for radiosonde TEMPs.
Area monitored		:90°N - 90°S, 180°W - 180°E.
Standard of comparison		:Background field from UKMO global model.
Observation times		:00 UTC and 12 UTC.
Level(s) monitored		:Standard levels between 1000.0 - 30.0 hPa
Element monitored		:GEOPOTENTIAL HEIGHT IN metres
Parameters monitored	:NUM OBS	:Number of observations available at level shown during period.
	:NUM GROSS	:Number of gross errors at level shown during period.
	:% REJ	:Percentage of observations rejected by quality control at level shown during period excluding those with gross errors.
	:SD	:SD of difference of observations from background values at level shown excluding those with gross errors.
	:BIAS	:Mean difference of observations from background values at level shown excluding those with gross errors.
	:RMS	:Root Mean Square difference of observations from background values at level shown excluding those with gross errors.
	:NUM LEVELS	:Number of levels satisfying selection criteria.
GROSS ERROR LIMITS	:Defined in Appendix I.1	
SELECTION CRITERIA	: ≥3 levels with ≥10 observations and ≥ 100 m weighted RMS.	

ONLY THE WORST LEVEL IS SHOWN WITH UNWEIGHTED RMS

WMO IDENT	OBS TIME	ELM	LEV	LAT/LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS	NUM LEVELS
23418	00	Z	200	65/ 57	22	1	54.9	142.4	152.6	9
23418	12	Z	250	65/ 57	25	1	43.5	130.6	137.7	10
34731	00	Z	200	47/ 40	15	0	41.3	114.5	121.7	6
34731	12	Z	200	47/ 40	16	0	30.0	112.6	116.5	6
35394	00	Z	70	50/ 73	11	0	146.6	-68.5	161.9	5
35700	00	Z	200	47/ 52	20	1	49.0	-67.8	83.7	5
36870	00	Z	850	43/ 77	29	1	22.8	-40.7	46.7	4
37018	12	Z	1000	44/ 39	17	0	33.5	-47.5	58.1	7
40373	12	Z	100	28/ 46	3	5	2.5	-290.7	290.7	4
42182	00	Z	200	29/ 77	21	1	86.7	-116.0	144.8	11
42182	12	Z	150	29/ 77	21	4	80.9	-86.3	118.3	9
42314	00	Z	100	27/ 95	9	1	87.6	-181.8	201.8	6
42314	12	Z	200	27/ 95	8	3	38.8	-200.2	204.0	5
42339	00	Z	200	26/ 73	26	1	58.9	-166.4	176.5	11
42361	00	Z	200	26/ 78	12	0	56.0	-134.2	145.5	4
42361	12	Z	250	26/ 78	10	1	62.9	-138.5	152.1	5
42369	00	Z	150	27/ 81	14	6	47.8	-189.4	195.4	11
42369	12	Z	1000	27/ 81	25	0	10.8	-59.2	60.2	11
42379	00	Z	150	27/ 83	12	3	104.2	-99.1	143.8	4
42379	12	Z	200	27/ 83	12	1	48.7	-150.0	157.7	5
42397	00	Z	200	27/ 88	16	0	93.0	-105.1	140.3	5
42410	00	Z	1000	26/ 92	1	25	0.0	-100.0	100.0	9
42410	12	Z	150	26/ 92	15	4	140.1	-162.7	214.7	9
42492	00	Z	150	26/ 85	20	0	66.3	-107.5	126.3	7
42492	12	Z	100	26/ 85	10	2	81.2	-167.2	185.9	6
42647	00	Z	150	23/ 73	18	0	97.3	-115.6	151.1	9
42647	12	Z	70	23/ 73	10	2	131.6	185.5	227.4	7
42667	00	Z	200	23/ 77	18	0	48.1	-102.4	113.1	4
42701	00	Z	30	23/ 85	17	1	158.2	179.8	239.5	6
42701	12	Z	100	23/ 85	23	1	106.9	-95.6	143.4	5
42809	00	Z	200	23/ 88	14	0	60.4	-137.2	149.9	9
42809	12	Z	200	23/ 88	9	1	50.2	-167.9	175.2	6
42867	00	Z	200	21/ 79	19	2	53.9	-163.2	171.8	9
42867	12	Z	150	21/ 79	19	0	102.6	-100.6	143.7	8
42971	00	Z	150	20/ 86	19	1	72.5	-105.8	128.3	6
42971	12	Z	200	20/ 86	24	0	80.2	-92.4	122.4	9
43003	00	Z	1000	19/ 73	28	0	11.4	-70.7	71.6	12
43003	12	Z	1000	19/ 73	21	3	10.3	-76.7	77.4	11
43128	00	Z	200	17/ 78	17	2	56.6	-142.4	153.2	8
43128	12	Z	200	17/ 78	19	2	95.2	-57.2	111.1	5
43150	00	Z	1000	18/ 83	6	24	3.9	-93.7	93.7	10
43150	12	Z	200	18/ 83	23	2	61.6	-134.3	147.8	9
43185	00	Z	100	16/ 81	15	0	110.0	-106.5	153.1	7
43185	12	Z	150	16/ 81	15	0	83.6	-42.5	93.8	4
43192	00	Z	200	15/ 74	12	1	59.2	-163.4	173.8	6
43279	00	Z	200	13/ 80	14	0	60.8	-110.9	126.5	7
43279	12	Z	200	13/ 80	11	0	60.1	-108.4	123.9	6
43285	00	Z	200	13/ 75	21	1	43.9	-103.7	112.6	4
43295	00	Z	200	13/ 78	26	0	65.3	-81.2	104.2	6
43333	00	Z	150	12/ 93	28	0	51.2	-132.3	141.9	6
43333	12	Z	150	12/ 93	19	4	43.2	-199.2	203.8	7
43346	12	Z	250	11/ 80	23	0	84.4	51.2	98.7	10
43353	00	Z	1000	10/ 76	19	3	8.6	-84.7	85.1	7
43353	12	Z	1000	10/ 76	12	11	4.5	-91.3	91.4	5
43371	00	Z	100	8/ 77	15	4	76.6	-200.7	214.8	9
43371	12	Z	30	8/ 77	11	0	201.2	222.5	299.9	8
96935	00	Z	1000	-7/ 113	9	2	4.1	-88.1	88.2	4

Figure 8. TEMP 500 hPa geopotential mean daily count. OCTOBER 2005
All hours
Global average number of observations in 24 hours = 1200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60°N 30°N 0° 30°S 60°S
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6 3 2 4 2 2 2 2 4 2 2 2 2 2 0 4 5 3 8 7 3 5 4 2 2 1 2 3 6 2 2 4 4
2 2 4 4 6 2 2 4 2 4 6 0 0 0 0 4 11 24 23 5 20 11 7 5 3 6 6 7 9 6 2 6 4 2 1
6 12 10 10 10 10 9 4 0 0 1 1 10 24 32 13 7 5 1 1 2 8 5 7 10 20 6 10
4 7 14 23 19 9 2 0 0 1 1 1 9 8 6 8 11 6 6 2 7 4 2 16 22 28 14 6
2 1 6 5 10 1 0 0 0 0 0 2 1 3 0 1 9 5 3 1 10 12 4 13 30 10 3 2 2
2 0 1 3 3 1 6 1 0 3 3 4 2 1 14 6 3 4 2 1 0 2
2 1 2 1 0 0 4 1 10 9 0 4 4 2 3
0 1 0 0 2 2 5 2 1 1 2 2 1 1 1 1
2 2 0 4 4 2 1 1 2 1 1 1 3 2 1
1 2 1 1 1 8 7 1 2 5 2 1 0 4 1 2 3 3 3
2 2 1 2 4 1 3 3 3 6 2 2
1 1 1 2 2 1 2 2 2
1 2 2
0 0 2 1 1 1 1 1
1 1 1 2

TABLE 6

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS
MONITORING CENTRE: EXETER
MONTH: Oct 05

Monitoring procedures

Period :One calendar month.

Data monitored :Reports from each unique identifier for radiosonde TEMPs.

Area monitored :90°N - 90°S, 180°W - 180°E.

Standard of comparison :Background field from UKMO global model.

Observation times :00 UTC and 12 UTC.

Level(s) monitored :Standard levels between 1000.0 - 100.0 hPa

Element monitored :VECTOR WIND in m s^{-1}

Parameters monitored

:NUM OBS :Number of observations available at level shown during period.

:NUM GROSS :Number of gross errors at level shown during period.

:% REJ :Percentage of observations rejected by quality control at level shown during period excluding those with gross errors.

:UBIAS,VBIAS :Mean difference of observations of U and V components from background values at level shown excluding those with gross errors.

:RMS :Root Mean Square difference of observations from background values at level shown excluding those with gross errors.

:NUM LEVELS :Number of levels satisfying selection criteria.

GROSS ERROR LIMITS :Defined in Appendix I.2

SELECTION CRITERIA : ≥ 10 observations and ≥ 15 m s^{-1} RMS vector wind.

ONLY THE STANDARD LEVEL BETWEEN 1000 - 100 hPa WITH HIGHEST RMS IS SHOWN

WMO IDENT	OBS TIME	ELM	LEV	LAT/LONG	NUM OBS	NUM GROSS	% REJ	UBIAS	VBIAS	RMS	LEVELS
08023	00	V	300	43/ -4	25	0	100	-7.1	-6.4	17.1	3
34731	12	V	250	47/ 40	19	0	100	5.6	0.3	17.9	1
40706	00	V	150	38/ 46	27	0	3	-3.5	-0.9	17.0	1
40809	12	V	200	33/ 59	12	1	100	-5.6	0.9	16.0	1
41594	00	V	200	32/ 73	14	0	100	-15.3	2.4	18.4	2
42182	00	V	150	29/ 77	21	0	100	-7.6	-6.2	16.6	2
47058	00	V	200	39/ 126	11	5	100	-7.9	-1.7	16.3	1
54337	12	V	200	41/ 121	25	0	4	-4.1	2.7	17.1	3
62337	00	V	200	31/ 34	14	0	100	-5.6	-2.3	16.2	2
62378	00	V	200	30/ 31	28	0	100	-6.2	0.8	20.3	1
68461	12	V	500	-28/ 28	12	0	100	10.7	2.8	15.2	1
72355	12	V	300	35/ -98	12	0	25	-8.5	-8.8	22.7	1
72376	12	V	300	37/-108	30	0	100	2.5	-1.8	15.9	1
78397	12	V	150	18/ -77	6	4	100	8.6	-9.5	30.2	2
89009	00	V	250	-90/ 0	30	0	100	-3.8	-18.6	27.9	6
89009	12	V	250	-90/ 0	28	0	100	-4.9	-17.7	26.5	6

Figure 9. TEMP/PILOT 300 hPa wind mean daily count. OCTOBER 2005
All hours
Global average number of observations in 24 hours = 1345

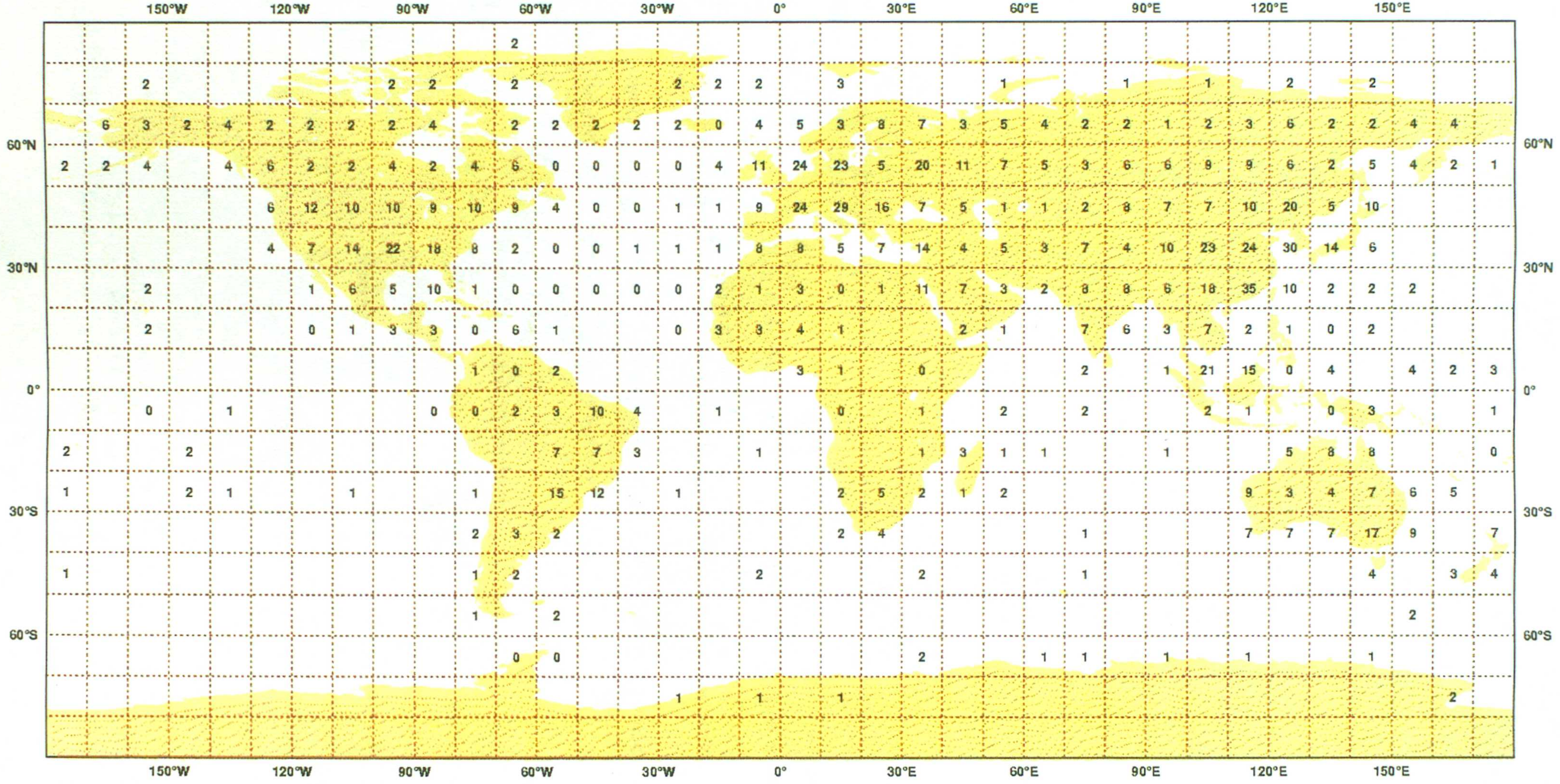

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
2
2 2 2 2 2 2 2 3 1 1 1 2 2
6 3 2 4 2 2 2 2 4 2 2 2 2 2 0 4 5 3 8 7 3 5 4 2 2 1 2 3 6 2 2 4 4
2 2 4 4 6 2 2 4 2 4 6 0 0 0 0 4 11 24 23 5 20 11 7 5 3 6 6 9 9 6 2 5 4 2 1
6 12 10 10 9 10 9 4 0 0 1 1 9 24 29 16 7 5 1 1 2 8 7 7 10 20 5 10
4 7 14 22 18 8 2 0 0 1 1 1 8 8 5 7 14 4 5 3 7 4 10 23 24 30 14 6
2 1 6 5 10 1 0 0 0 0 0 2 1 3 0 1 11 7 3 2 8 8 6 18 35 10 2 2 2
2 0 1 3 3 0 6 1 0 3 3 4 1 2 1 7 6 3 7 2 1 0 2
1 0 2 3 1 0 2 1 21 15 0 4 4 2 3
0 1 0 0 2 3 10 4 1 0 1 2 2 2 1 0 3 1
2 2 7 7 3 1 1 3 1 1 1 5 8 8 0
1 2 1 1 1 15 12 1 2 5 2 1 2 9 3 4 7 6 5
2 3 2 2 4 1 7 7 7 17 9 7
1 1 2 2 2 1 4 3 4
1 2 2
0 0 2 1 1 1 1 1
1 1 1 2

TABLE 7

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS
MONITORING CENTRE: EXETER
MONTH: Oct 05

Monitoring procedures

Period		:One calendar month.
Data monitored		:Reports from each unique identifier for radiosonde TEMPs.
Area monitored		:90°N - 90°S, 180°W - 180°E.
Standard of comparison		:Background field from UKMO global model.
Observation times		:00 UTC and 12 UTC.
Level(s) monitored		:Standard levels between 500.0 - 150.0 hPa
Element monitored		:WIND DIRECTION in degrees
Parameters monitored		
	:NUM OBS	:Average number of observations at all levels.
	:BIAS	:Mean difference of observations from background values from all levels.
	:MAX SPREAD	:(For observation - background values) Maximum absolute difference of SD at any level from SD at all levels
	:SD	:SD of difference of observations from background values at all levels.

SELECTION CRITERIA

:NUM OBS ≥ 5, and
ABSOLUTE BIAS ≥ 10°, with
SD < 30°, and
MAX SPREAD < 10°

WMO IDENT	OBS TIME	ELM	LAT/LONG	NUM OBS	BIAS	MAX SPREAD	SD
08001	12	DD	43/ -8	22	18.2	9.7	27.2
31168	00	DD	56/ 138	7	-33.8	4.9	19.1
33791	12	DD	48/ 33	23	-14.2	2.9	9.1
34731	00	DD	47/ 40	15	10.9	3.0	18.1
34731	12	DD	47/ 40	17	10.4	4.5	13.0
42182	00	DD	29/ 77	20	15.1	8.3	18.7
43333	00	DD	12/ 93	19	13.0	5.2	16.0
43333	12	DD	12/ 93	15	14.8	6.9	18.6
48568	12	DD	7/ 101	18	11.4	8.5	18.3
58968	00	DD	25/ 122	25	20.6	5.0	10.3
58968	12	DD	25/ 122	21	18.2	1.9	10.2
61995	00	DD	-20/ 57	12	-13.3	8.7	16.5
61995	12	DD	-20/ 57	18	-13.6	4.2	16.1
70231	00	DD	63/-156	18	-12.7	3.6	10.6
70231	12	DD	63/-156	18	-12.5	3.8	8.8

MONITORING OF SATELLITE WINDS

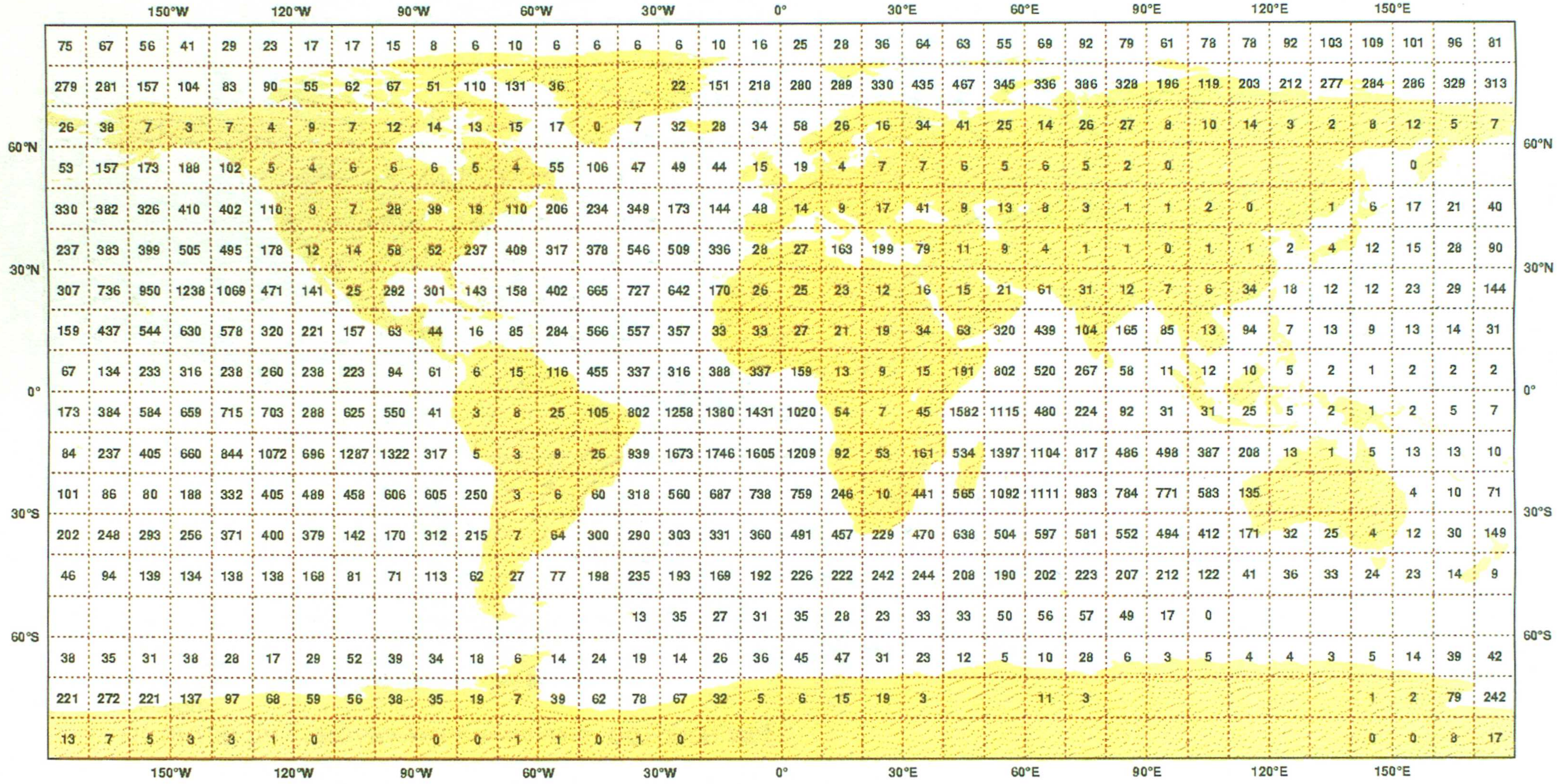
MONITORING CENTRE: EXETER

MONTH: Oct 05

Monitoring procedures

Period	:One calendar month.
Data monitored	:Reports from GOES-9, GOES-10, GOES-12, METEOSAT-5, METEOSAT-7
Standard of comparison	:Background field from UKMO global model.
Selection Criteria	:number of observations > 10.
Data Extracted	:Layer 701 - 1000 hPa 401 - 700 hPa 101 - 400 hPa
	:Mean wind
	:Mean observation minus background vector wind differences
	:Mean observation minus background speed differences
	:RMS of observation minus background vector differences

Figure 10. SATOB 701 - 1000 hPa mean daily count. OCTOBER 2005
Global average number of observations in 24 hours = 107867



75	67	56	41	29	23	17	17	15	8	6	10	6	6	6	6	10	16	25	28	36	64	63	55	69	92	79	61	78	78	92	103	109	101	96	81
279	281	157	104	83	90	55	62	67	51	110	131	36			22	151	218	280	289	330	435	467	345	336	386	328	196	119	203	212	277	284	286	329	313
26	38	7	3	7	4	9	7	12	14	13	15	17	0	7	32	28	34	58	26	16	34	41	25	14	26	27	8	10	14	3	2	8	12	5	7
53	157	173	188	102	5	4	6	6	6	5	4	55	106	47	49	44	15	19	4	7	7	6	5	6	5	2	0						0		
330	382	326	410	402	110	8	7	28	39	19	110	206	234	349	173	144	48	14	9	17	41	9	13	8	3	1	1	2	0		1	6	17	21	40
237	383	399	505	495	178	12	14	58	52	237	409	317	378	546	509	336	28	27	163	199	79	11	9	4	1	1	0	1	1	2	4	12	15	28	90
307	736	950	1238	1069	471	141	25	282	301	143	158	402	665	727	642	170	26	25	23	12	16	15	21	61	31	12	7	6	34	18	12	12	23	29	144
159	437	544	630	578	320	221	157	63	44	16	85	284	566	557	357	33	33	27	21	19	34	63	320	439	104	165	85	13	94	7	13	9	13	14	31
67	134	233	316	238	260	238	223	94	61	6	15	116	455	337	316	388	337	159	13	9	15	191	802	520	267	58	11	12	10	5	2	1	2	2	2
173	384	584	659	715	703	288	625	550	41	3	8	25	105	802	1258	1380	1431	1020	54	7	45	1582	1115	480	224	92	31	31	25	5	2	1	2	5	7
84	237	405	660	844	1072	696	1287	1322	317	5	3	9	26	939	1673	1746	1605	1209	92	53	161	534	1397	1104	817	486	498	387	208	13	1	5	13	13	10
101	86	80	188	332	405	489	458	606	605	250	3	6	60	318	560	687	738	759	246	10	441	565	1092	1111	983	784	771	583	135				4	10	71
202	248	293	256	371	400	379	142	170	312	215	7	64	300	290	303	331	360	491	457	229	470	638	504	597	581	552	494	412	171	32	25	4	12	30	149
46	94	139	134	138	138	168	81	71	113	62	27	77	198	235	193	169	192	226	222	242	244	208	190	202	223	207	212	122	41	36	33	24	23	14	9
														13	35	27	31	35	28	23	33	33	50	56	57	49	17	0							
38	35	31	38	28	17	29	52	39	34	18	6	14	24	19	14	26	36	45	47	31	23	12	5	10	28	6	3	5	4	4	3	5	14	39	42
221	272	221	137	97	68	59	56	38	35	19	7	39	62	78	67	32	5	6	15	19	3			11	3							1	2	79	242
13	7	5	3	3	1	0			0	0	1	1	0	1	0																	0	0	8	17

Figure 11. SATOB 701 - 1000 hPa vector mean wind. OCTOBER 2005
All observations
Arrows are plotted where greater than 10 obs are present

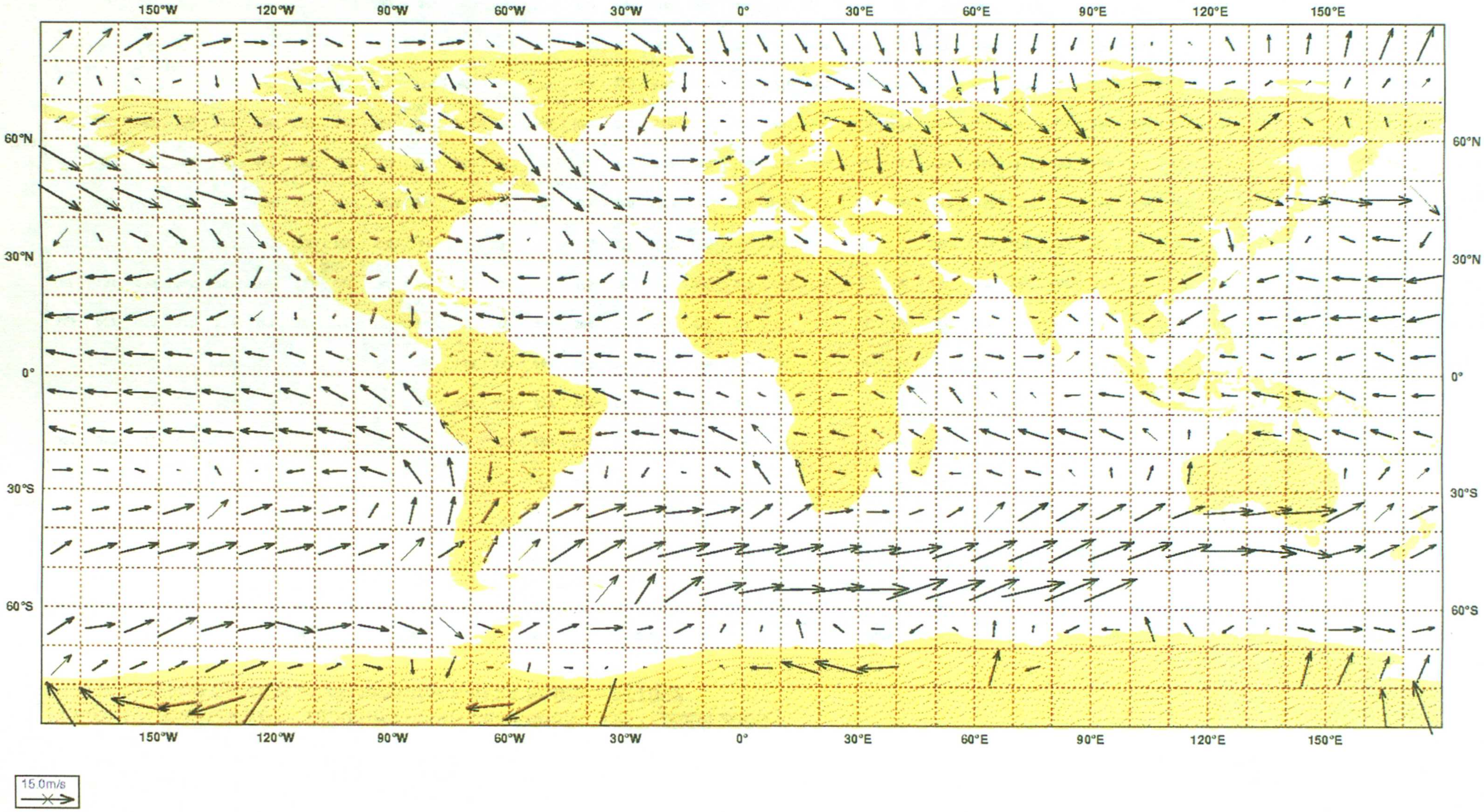

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 12. SATOB 701 - 1000 hPa mean vector wind differences. OCTOBER 2005
All observations
Arrows are plotted where greater than 10 obs are present

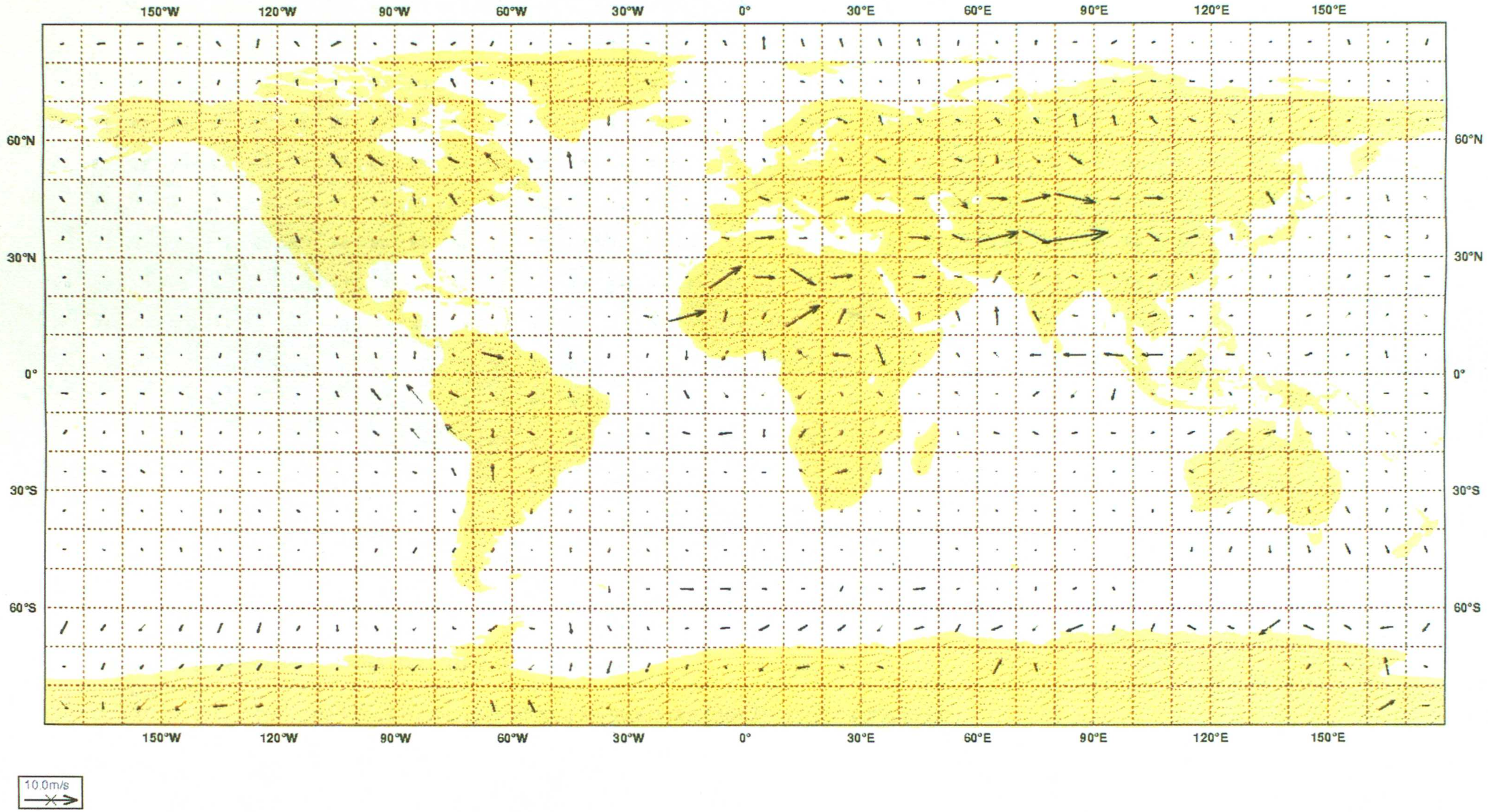
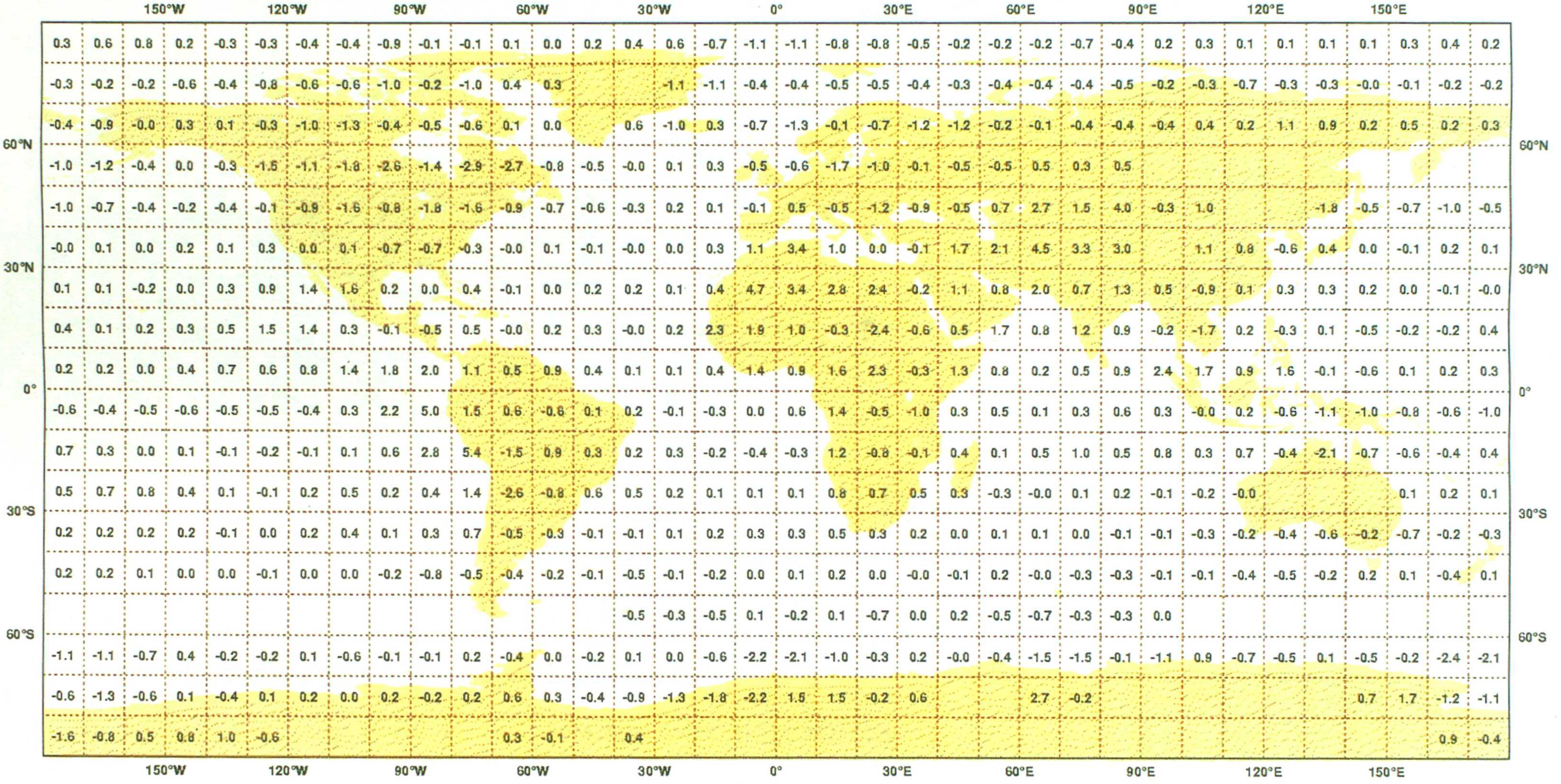
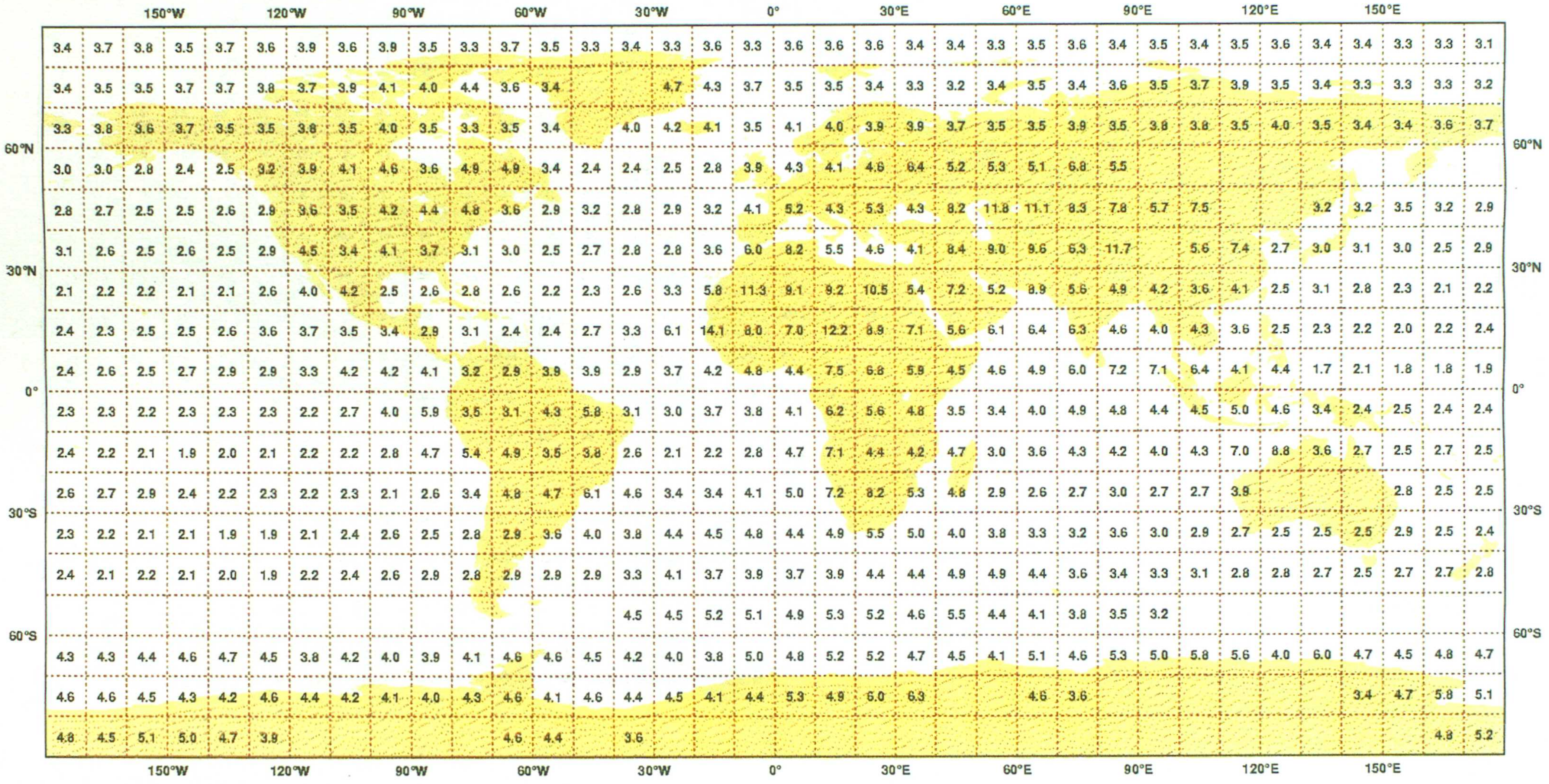

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
10.0m/s

Figure 13. SATOB 701 - 1000 hPa mean O-B speed differences (ms-1). OCTOBER 2005
All observations
Values are plotted where greater than 10 obs are present



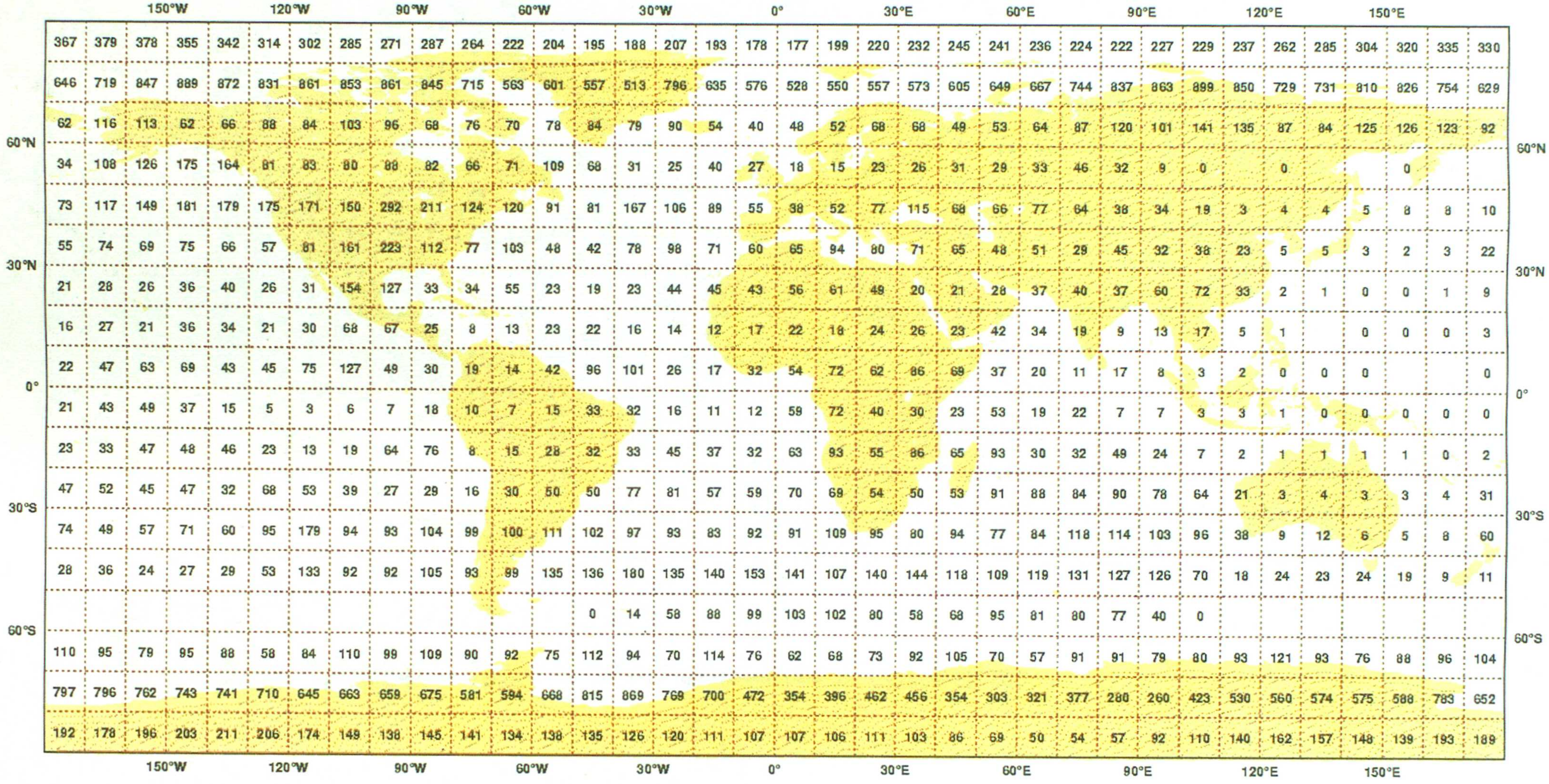
0.3	0.6	0.8	0.2	-0.3	-0.3	-0.4	-0.4	-0.9	-0.1	-0.1	0.1	0.0	0.2	0.4	0.6	-0.7	-1.1	-1.1	-0.8	-0.8	-0.5	-0.2	-0.2	-0.2	-0.7	-0.4	0.2	0.3	0.1	0.1	0.1	0.1	0.3	0.4	0.2
-0.3	-0.2	-0.2	-0.6	-0.4	-0.8	-0.6	-0.6	-1.0	-0.2	-1.0	0.4	0.3			-1.1	-1.1	-0.4	-0.4	-0.5	-0.5	-0.4	-0.3	-0.4	-0.4	-0.4	-0.5	-0.2	-0.3	-0.7	-0.3	-0.3	-0.0	-0.1	-0.2	-0.2
-0.4	-0.9	-0.0	0.3	0.1	-0.3	-1.0	-1.3	-0.4	-0.5	-0.6	0.1	0.0		0.6	-1.0	0.3	-0.7	-1.3	-0.1	-0.7	-1.2	-1.2	-0.2	-0.1	-0.4	-0.4	-0.4	0.4	0.2	1.1	0.9	0.2	0.5	0.2	0.3
-1.0	-1.2	-0.4	0.0	-0.3	-1.5	-1.1	-1.8	-2.6	-1.4	-2.9	-2.7	-0.8	-0.5	-0.0	0.1	0.3	-0.5	-0.6	-1.7	-1.0	-0.1	-0.5	-0.5	0.5	0.3	0.5									
-1.0	-0.7	-0.4	-0.2	-0.4	-0.1	-0.9	-1.6	-0.8	-1.8	-1.6	-0.9	-0.7	-0.6	-0.3	0.2	0.1	-0.1	0.5	-0.5	-1.2	-0.9	-0.5	0.7	2.7	1.5	4.0	-0.3	1.0			-1.8	-0.5	-0.7	-1.0	-0.5
-0.0	0.1	0.0	0.2	0.1	0.3	0.0	0.1	-0.7	-0.7	-0.3	-0.0	0.1	-0.1	-0.0	0.0	0.3	1.1	3.4	1.0	0.0	-0.1	1.7	2.1	4.5	3.3	3.0		1.1	0.8	-0.6	0.4	0.0	-0.1	0.2	0.1
0.1	0.1	-0.2	0.0	0.3	0.9	1.4	1.6	0.2	0.0	0.4	-0.1	0.0	0.2	0.2	0.1	0.4	4.7	3.4	2.8	2.4	-0.2	1.1	0.8	2.0	0.7	1.3	0.5	-0.9	0.1	0.3	0.3	0.2	0.0	-0.1	-0.0
0.4	0.1	0.2	0.3	0.5	1.5	1.4	0.3	-0.1	-0.5	0.5	-0.0	0.2	0.3	-0.0	0.2	2.3	1.9	1.0	-0.3	-2.4	-0.6	0.5	1.7	0.8	1.2	0.9	-0.2	-1.7	0.2	-0.3	0.1	-0.5	-0.2	-0.2	0.4
0.2	0.2	0.0	0.4	0.7	0.6	0.8	1.4	1.8	2.0	1.1	0.5	0.9	0.4	0.1	0.1	0.4	1.4	0.9	1.6	2.3	-0.3	1.3	0.8	0.2	0.5	0.9	2.4	1.7	0.9	1.6	-0.1	-0.6	0.1	0.2	0.3
-0.6	-0.4	-0.5	-0.6	-0.5	-0.5	-0.4	0.3	2.2	5.0	1.5	0.6	-0.6	0.1	0.2	-0.1	-0.3	0.0	0.6	1.4	-0.5	-1.0	0.3	0.5	0.1	0.3	0.6	0.3	-0.0	0.2	-0.6	-1.1	-1.0	-0.8	-0.6	-1.0
0.7	0.3	0.0	0.1	-0.1	-0.2	-0.1	0.1	0.6	2.8	5.4	-1.5	0.9	0.3	0.2	0.3	-0.2	-0.4	-0.3	1.2	-0.8	-0.1	0.4	0.1	0.5	1.0	0.5	0.8	0.3	0.7	-0.4	-2.1	-0.7	-0.6	-0.4	0.4
0.5	0.7	0.8	0.4	0.1	-0.1	0.2	0.5	0.2	0.4	1.4	-2.6	-0.8	0.6	0.5	0.2	0.1	0.1	0.1	0.8	0.7	0.5	0.3	-0.3	-0.0	0.1	0.2	-0.1	-0.2	-0.0				0.1	0.2	0.1
0.2	0.2	0.2	0.2	-0.1	0.0	0.2	0.4	0.1	0.3	0.7	-0.5	-0.3	-0.1	-0.1	0.1	0.2	0.3	0.3	0.5	0.3	0.2	0.0	0.1	0.1	0.0	-0.1	-0.1	-0.3	-0.2	-0.4	-0.6	-0.2	-0.7	-0.2	-0.3
0.2	0.2	0.1	0.0	0.0	-0.1	0.0	0.0	-0.2	-0.8	-0.5	-0.4	-0.2	-0.1	-0.5	-0.1	-0.2	0.0	0.1	0.2	0.0	-0.0	-0.1	0.2	-0.0	-0.3	-0.3	-0.1	-0.1	-0.4	-0.5	-0.2	0.2	0.1	-0.4	0.1
														-0.5	-0.3	-0.5	0.1	-0.2	0.1	-0.7	0.0	0.2	-0.5	-0.7	-0.3	-0.3	0.0								
-1.1	-1.1	-0.7	0.4	-0.2	-0.2	0.1	-0.6	-0.1	-0.1	0.2	-0.4	0.0	-0.2	0.1	0.0	-0.6	-2.2	-2.1	-1.0	-0.3	0.2	-0.0	-0.4	-1.5	-1.5	-0.1	-1.1	0.9	-0.7	-0.5	0.1	-0.5	-0.2	-2.4	-2.1
-0.6	-1.3	-0.6	0.1	-0.4	0.1	0.2	0.0	0.2	-0.2	0.2	0.6	0.3	-0.4	-0.9	-1.3	-1.8	-2.2	1.5	1.5	-0.2	0.6			2.7	-0.2							0.7	1.7	-1.2	-1.1
-1.6	-0.8	0.5	0.8	1.0	-0.6						0.3	-0.1		0.4																				0.9	-0.4

Figure 14. SATOB 701 - 1000 hPa mean RMS O-B vector differences (ms-1). OCTOBER 2005
All observations
Values are plotted where greater than 10 obs are present



3.4	3.7	3.8	3.5	3.7	3.6	3.9	3.6	3.9	3.5	3.3	3.7	3.5	3.3	3.4	3.3	3.6	3.3	3.6	3.6	3.6	3.4	3.4	3.3	3.5	3.6	3.4	3.5	3.4	3.5	3.6	3.4	3.4	3.3	3.3	3.1
3.4	3.5	3.5	3.7	3.7	3.8	3.7	3.9	4.1	4.0	4.4	3.6	3.4			4.7	4.3	3.7	3.5	3.5	3.4	3.3	3.2	3.4	3.5	3.4	3.6	3.5	3.7	3.9	3.5	3.4	3.3	3.3	3.3	3.2
3.3	3.8	3.6	3.7	3.5	3.5	3.8	3.5	4.0	3.5	3.3	3.5	3.4		4.0	4.2	4.1	3.5	4.1	4.0	3.9	3.9	3.7	3.5	3.5	3.9	3.5	3.8	3.8	3.5	4.0	3.5	3.4	3.4	3.6	3.7
3.0	3.0	2.8	2.4	2.5	3.2	3.9	4.1	4.6	3.6	4.9	4.9	3.4	2.4	2.4	2.5	2.8	3.9	4.3	4.1	4.6	6.4	5.2	5.3	5.1	6.8	5.5									
2.8	2.7	2.5	2.5	2.6	2.9	3.6	3.5	4.2	4.4	4.8	3.6	2.9	3.2	2.8	2.9	3.2	4.1	5.2	4.3	5.3	4.3	8.2	11.8	11.1	8.3	7.8	5.7	7.5			3.2	3.2	3.5	3.2	2.9
3.1	2.6	2.5	2.6	2.5	2.9	4.5	3.4	4.1	3.7	3.1	3.0	2.5	2.7	2.8	2.8	3.6	6.0	8.2	5.5	4.6	4.1	8.4	9.0	9.6	6.3	11.7		5.6	7.4	2.7	3.0	3.1	3.0	2.5	2.9
2.1	2.2	2.2	2.1	2.1	2.6	4.0	4.2	2.5	2.6	2.8	2.6	2.2	2.3	2.6	3.3	5.8	11.3	9.1	9.2	10.5	5.4	7.2	5.2	8.9	5.6	4.9	4.2	3.6	4.1	2.5	3.1	2.8	2.3	2.1	2.2
2.4	2.3	2.5	2.5	2.6	3.6	3.7	3.5	3.4	2.9	3.1	2.4	2.4	2.7	3.3	6.1	14.1	8.0	7.0	12.2	8.9	7.1	5.6	6.1	6.4	6.3	4.6	4.0	4.3	3.6	2.5	2.3	2.2	2.0	2.2	2.4
2.4	2.6	2.5	2.7	2.9	2.9	3.3	4.2	4.2	4.1	3.2	2.9	3.9	3.9	2.9	3.7	4.2	4.8	4.4	7.5	6.8	5.9	4.5	4.6	4.9	6.0	7.2	7.1	6.4	4.1	4.4	1.7	2.1	1.8	1.8	1.9
2.3	2.3	2.2	2.3	2.3	2.3	2.2	2.7	4.0	5.9	3.5	3.1	4.3	5.8	3.1	3.0	3.7	3.8	4.1	6.2	5.6	4.8	3.5	3.4	4.0	4.9	4.8	4.4	4.5	5.0	4.6	3.4	2.4	2.5	2.4	2.4
2.4	2.2	2.1	1.9	2.0	2.1	2.2	2.2	2.8	4.7	5.4	4.9	3.5	3.8	2.6	2.1	2.2	2.8	4.7	7.1	4.4	4.2	4.7	3.0	3.6	4.3	4.2	4.0	4.3	7.0	8.8	3.6	2.7	2.5	2.7	2.5
2.6	2.7	2.9	2.4	2.2	2.3	2.2	2.3	2.1	2.6	3.4	4.8	4.7	6.1	4.6	3.4	3.4	4.1	5.0	7.2	8.2	5.3	4.8	2.9	2.6	2.7	3.0	2.7	2.7	3.9				2.8	2.5	2.5
2.3	2.2	2.1	2.1	1.9	1.9	2.1	2.4	2.6	2.5	2.8	2.9	3.6	4.0	3.8	4.4	4.5	4.8	4.4	4.9	5.5	5.0	4.0	3.8	3.3	3.2	3.6	3.0	2.9	2.7	2.5	2.5	2.5	2.9	2.5	2.4
2.4	2.1	2.2	2.1	2.0	1.9	2.2	2.4	2.6	2.9	2.8	2.9	2.9	2.9	3.3	4.1	3.7	3.9	3.7	3.9	4.4	4.4	4.9	4.9	4.4	3.6	3.4	3.3	3.1	2.8	2.8	2.7	2.5	2.7	2.7	2.8
														4.5	4.5	5.2	5.1	4.9	5.3	5.2	4.6	5.5	4.4	4.1	3.8	3.5	3.2								
4.3	4.3	4.4	4.6	4.7	4.5	3.8	4.2	4.0	3.9	4.1	4.6	4.6	4.5	4.2	4.0	3.8	5.0	4.8	5.2	5.2	4.7	4.5	4.1	5.1	4.6	5.3	5.0	5.8	5.6	4.0	6.0	4.7	4.5	4.8	4.7
4.6	4.6	4.5	4.3	4.2	4.6	4.4	4.2	4.1	4.0	4.3	4.6	4.1	4.6	4.4	4.5	4.1	4.4	5.3	4.9	6.0	6.3			4.6	3.6							3.4	4.7	5.8	5.1
4.8	4.5	5.1	5.0	4.7	3.9						4.6	4.4		3.6																				4.8	5.2

Figure 15. SATOB 401 - 700 hPa mean daily count. OCTOBER 2005
Global average number of observations in 24 hours = 88723



367	379	378	355	342	314	302	285	271	287	264	222	204	195	188	207	193	178	177	199	220	232	245	241	236	224	222	227	229	237	262	285	304	320	335	330
646	719	847	889	872	831	861	853	861	845	715	563	601	557	513	796	635	576	528	550	557	573	605	649	667	744	837	863	899	850	729	731	810	826	754	629
62	116	113	62	66	88	84	103	96	68	76	70	78	84	79	90	54	40	48	52	68	68	49	53	64	87	120	101	141	135	87	84	125	126	123	92
34	108	126	175	164	81	83	80	88	82	66	71	109	68	31	25	40	27	18	15	23	26	31	29	33	46	32	9	0		0			0		
73	117	149	181	179	175	171	150	292	211	124	120	91	81	167	106	89	55	38	52	77	115	68	66	77	64	38	34	19	3	4	4	5	8	8	10
55	74	69	75	66	57	81	161	223	112	77	103	48	42	78	98	71	60	65	94	80	71	65	48	51	29	45	32	38	23	5	5	3	2	3	22
21	28	26	36	40	26	31	154	127	33	34	55	23	19	23	44	45	43	56	61	49	20	21	28	37	40	37	60	72	33	2	1	0	0	1	9
16	27	21	36	34	21	30	68	67	25	8	13	23	22	16	14	12	17	22	18	24	26	23	42	34	19	9	13	17	5	1		0	0	0	3
22	47	63	69	43	45	75	127	49	30	19	14	42	96	101	26	17	32	54	72	62	86	69	37	20	11	17	8	3	2	0	0	0			0
21	43	49	37	15	5	3	6	7	18	10	7	15	33	32	16	11	12	59	72	40	30	23	53	19	22	7	7	3	3	1	0	0	0	0	0
23	33	47	48	46	23	13	19	64	76	8	15	28	32	33	45	37	32	63	93	55	86	65	93	30	32	49	24	7	2	1	1	1	1	0	2
47	52	45	47	32	68	53	39	27	29	16	30	50	50	77	81	57	59	70	69	54	50	53	91	88	84	90	78	64	21	3	4	3	3	4	31
74	49	57	71	60	95	179	94	93	104	99	100	111	102	97	93	83	92	91	109	95	80	94	77	84	118	114	103	96	38	9	12	6	5	8	60
28	36	24	27	29	53	133	92	92	105	93	99	135	136	180	135	140	153	141	107	140	144	118	109	119	131	127	126	70	18	24	23	24	19	9	11
													0	14	58	88	99	103	102	80	58	68	95	81	80	77	40	0							
110	95	79	95	88	58	84	110	99	109	90	92	75	112	94	70	114	76	62	68	73	92	105	70	57	91	91	79	80	93	121	93	76	88	96	104
797	796	762	743	741	710	645	663	659	675	581	594	668	815	869	769	700	472	354	396	462	456	354	303	321	377	280	260	423	530	560	574	575	588	783	652
192	178	196	203	211	206	174	149	138	145	141	134	138	135	126	120	111	107	107	106	111	103	86	69	50	54	57	92	110	140	162	157	148	139	193	189

Figure 16. SATOB 401 - 700 hPa vector mean wind. OCTOBER 2005
All observations
Arrows are plotted where greater than 10 obs are present

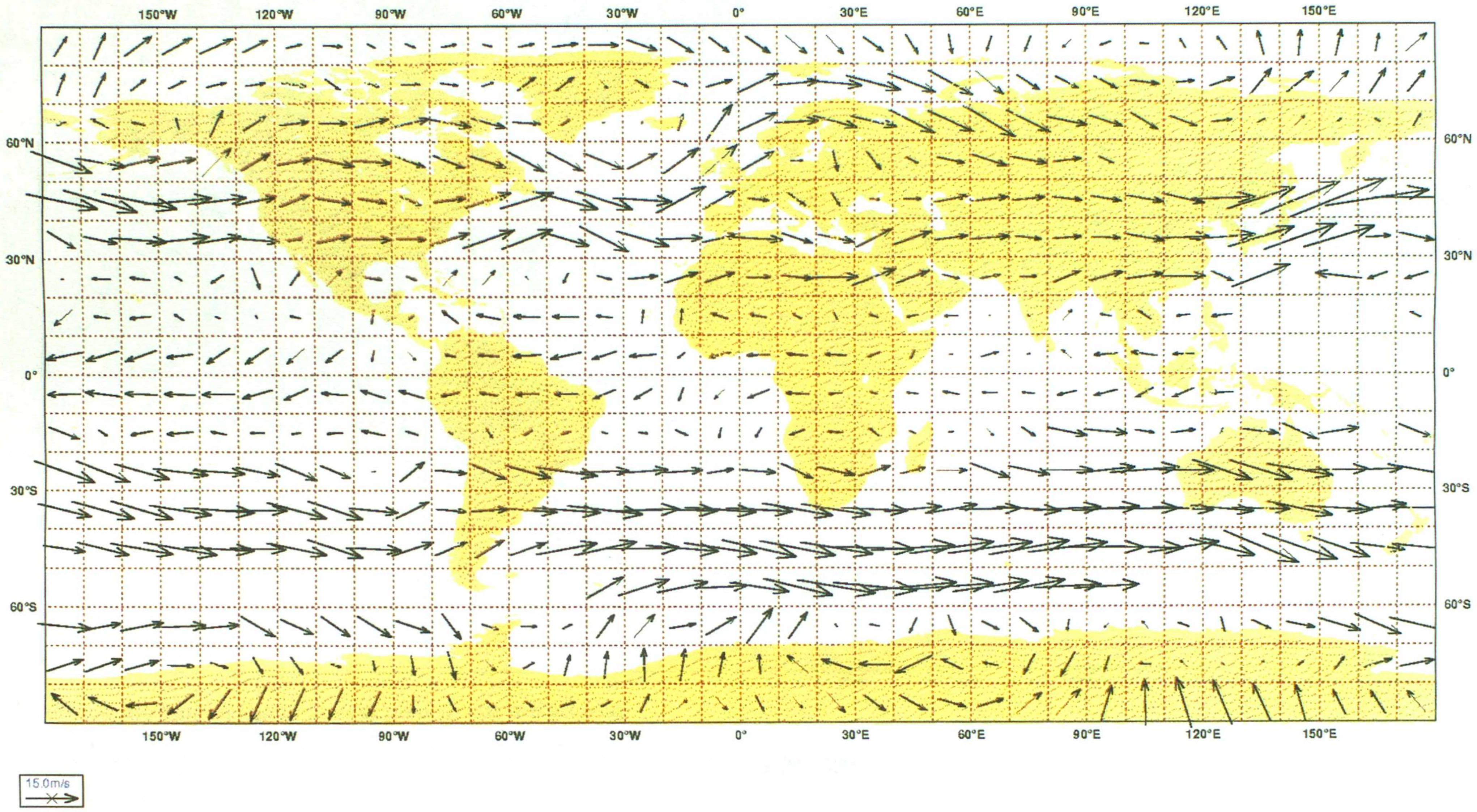

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 17. SATOB 401 - 700 hPa mean vector wind differences. OCTOBER 2005
All observations
Arrows are plotted where greater than 10 obs are present

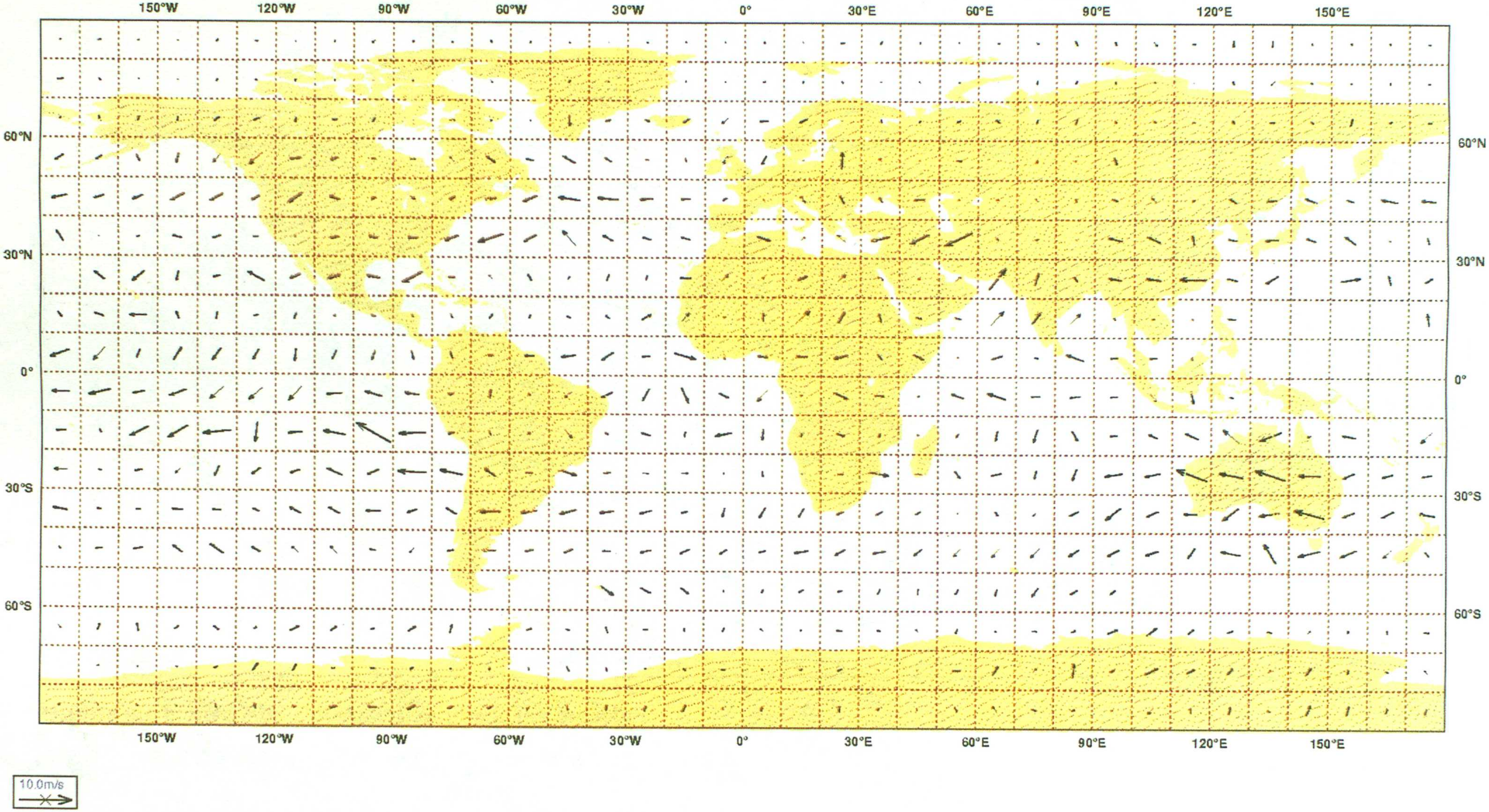
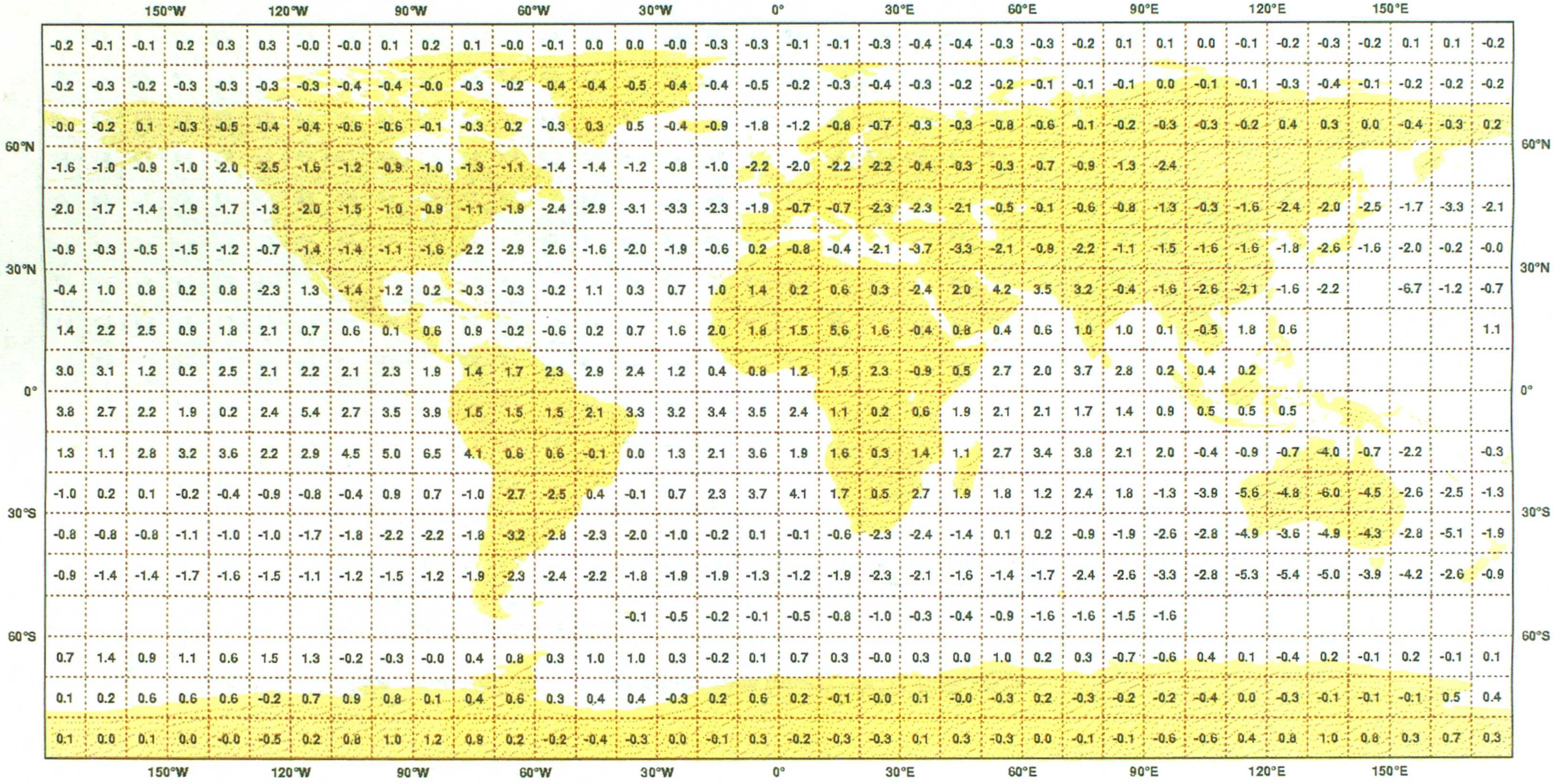
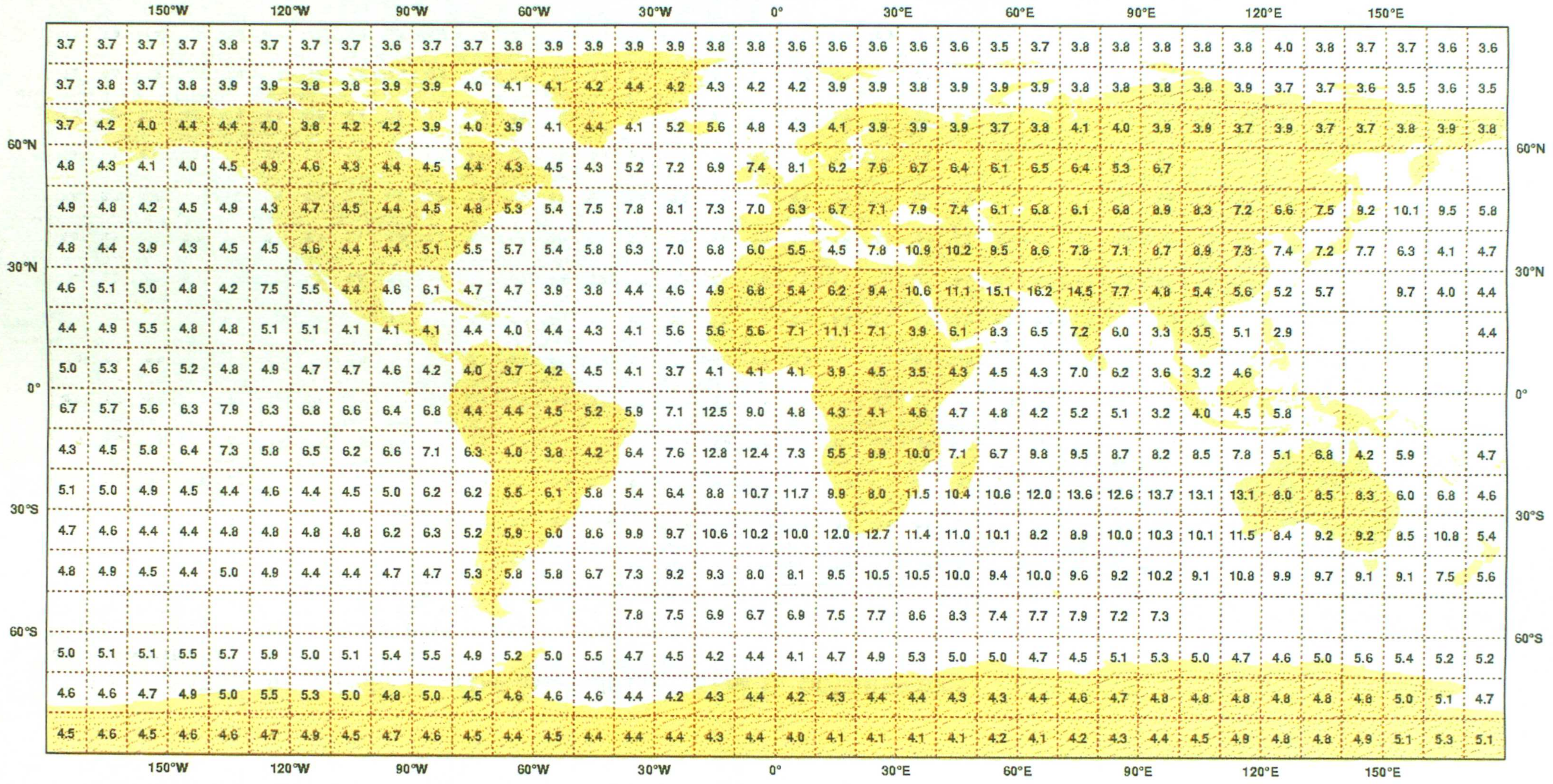

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
10.0m/s

Figure 18. SATOB 401 - 700 hPa mean O-B speed differences (ms-1). OCTOBER 2005
All observations
Values are plotted where greater than 10 obs are present



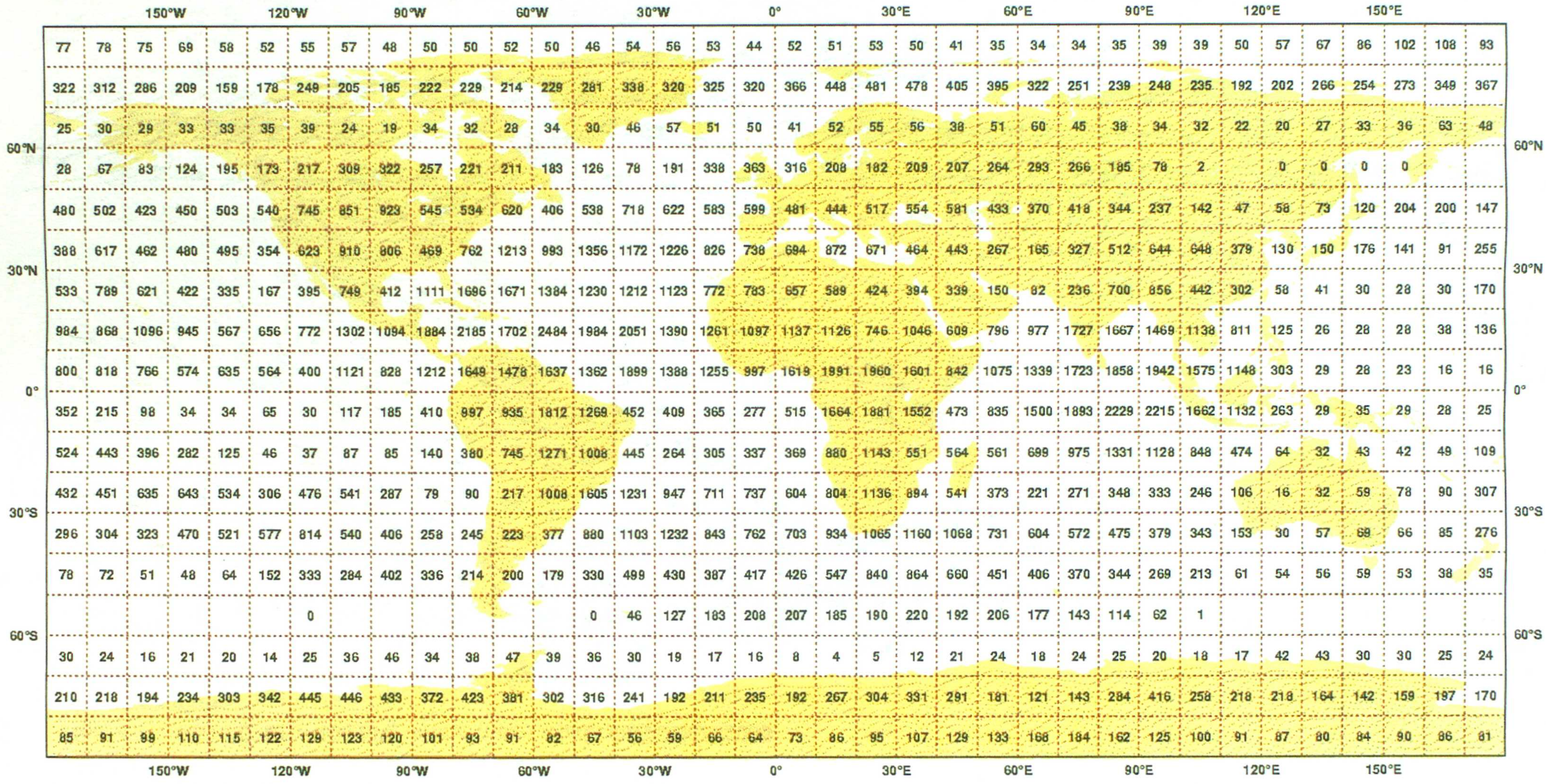
-0.2	-0.1	-0.1	0.2	0.3	0.3	-0.0	-0.0	0.1	0.2	0.1	-0.0	-0.1	0.0	0.0	-0.0	-0.3	-0.3	-0.1	-0.1	-0.3	-0.4	-0.4	-0.3	-0.3	-0.2	0.1	0.1	0.0	-0.1	-0.2	-0.3	-0.2	0.1	0.1	-0.2
-0.2	-0.3	-0.2	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.0	-0.3	-0.2	-0.4	-0.4	-0.5	-0.4	-0.4	-0.5	-0.2	-0.3	-0.4	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	0.0	-0.1	-0.1	-0.3	-0.4	-0.1	-0.2	-0.2	-0.2
-0.0	-0.2	0.1	-0.3	-0.5	-0.4	-0.4	-0.6	-0.6	-0.1	-0.3	0.2	-0.3	0.3	0.5	-0.4	-0.9	-1.8	-1.2	-0.8	-0.7	-0.3	-0.3	-0.8	-0.6	-0.1	-0.2	-0.3	-0.3	-0.2	0.4	0.3	0.0	-0.4	-0.3	0.2
-1.6	-1.0	-0.9	-1.0	-2.0	-2.5	-1.6	-1.2	-0.9	-1.0	-1.3	-1.1	-1.4	-1.4	-1.2	-0.8	-1.0	-2.2	-2.0	-2.2	-2.2	-0.4	-0.3	-0.3	-0.7	-0.9	-1.3	-2.4								
-2.0	-1.7	-1.4	-1.9	-1.7	-1.3	-2.0	-1.5	-1.0	-0.9	-1.1	-1.9	-2.4	-2.9	-3.1	-3.3	-2.3	-1.9	-0.7	-0.7	-2.3	-2.3	-2.1	-0.5	-0.1	-0.6	-0.8	-1.3	-0.3	-1.6	-2.4	-2.0	-2.5	-1.7	-3.3	-2.1
-0.9	-0.3	-0.5	-1.5	-1.2	-0.7	-1.4	-1.4	-1.1	-1.6	-2.2	-2.9	-2.6	-1.6	-2.0	-1.9	-0.6	0.2	-0.8	-0.4	-2.1	-3.7	-3.3	-2.1	-0.8	-2.2	-1.1	-1.5	-1.6	-1.6	-1.8	-2.6	-1.6	-2.0	-0.2	-0.0
-0.4	1.0	0.8	0.2	0.8	-2.3	1.3	-1.4	-1.2	0.2	-0.3	-0.3	-0.2	1.1	0.3	0.7	1.0	1.4	0.2	0.6	0.3	-2.4	2.0	4.2	3.5	3.2	-0.4	-1.6	-2.6	-2.1	-1.6	-2.2		-6.7	-1.2	-0.7
1.4	2.2	2.5	0.9	1.8	2.1	0.7	0.6	0.1	0.6	0.9	-0.2	-0.6	0.2	0.7	1.6	2.0	1.8	1.5	5.6	1.6	-0.4	0.8	0.4	0.6	1.0	1.0	0.1	-0.5	1.8	0.6					1.1
3.0	3.1	1.2	0.2	2.5	2.1	2.2	2.1	2.3	1.9	1.4	1.7	2.3	2.9	2.4	1.2	0.4	0.8	1.2	1.5	2.3	-0.9	0.5	2.7	2.0	3.7	2.8	0.2	0.4	0.2						
3.8	2.7	2.2	1.9	0.2	2.4	5.4	2.7	3.5	3.9	1.5	1.5	1.5	2.1	3.3	3.2	3.4	3.5	2.4	1.1	0.2	0.6	1.9	2.1	2.1	1.7	1.4	0.9	0.5	0.5	0.5					
1.3	1.1	2.8	3.2	3.6	2.2	2.9	4.5	5.0	6.5	4.1	0.6	0.6	-0.1	0.0	1.3	2.1	3.6	1.9	1.6	0.3	1.4	1.1	2.7	3.4	3.8	2.1	2.0	-0.4	-0.9	-0.7	-4.0	-0.7	-2.2		-0.3
-1.0	0.2	0.1	-0.2	-0.4	-0.9	-0.8	-0.4	0.9	0.7	-1.0	-2.7	-2.5	0.4	-0.1	0.7	2.3	3.7	4.1	1.7	0.5	2.7	1.9	1.8	1.2	2.4	1.8	-1.3	-3.9	-5.6	-4.8	-6.0	-4.5	-2.6	-2.5	-1.3
-0.8	-0.8	-0.8	-1.1	-1.0	-1.0	-1.7	-1.8	-2.2	-2.2	-1.8	-3.2	-2.8	-2.3	-2.0	-1.0	-0.2	0.1	-0.1	-0.6	-2.3	-2.4	-1.4	0.1	0.2	-0.9	-1.9	-2.6	-2.8	-4.9	-3.6	-4.9	-4.3	-2.8	-5.1	-1.9
-0.9	-1.4	-1.4	-1.7	-1.6	-1.5	-1.1	-1.2	-1.5	-1.2	-1.9	-2.3	-2.4	-2.2	-1.8	-1.9	-1.9	-1.3	-1.2	-1.9	-2.3	-2.1	-1.6	-1.4	-1.7	-2.4	-2.6	-3.3	-2.8	-5.3	-5.4	-5.0	-3.9	-4.2	-2.6	-0.9
														-0.1	-0.5	-0.2	-0.1	-0.5	-0.8	-1.0	-0.3	-0.4	-0.9	-1.6	-1.6	-1.5	-1.6								
0.7	1.4	0.9	1.1	0.6	1.5	1.3	-0.2	-0.3	-0.0	0.4	0.8	0.3	1.0	1.0	0.3	-0.2	0.1	0.7	0.3	-0.0	0.3	0.0	1.0	0.2	0.3	-0.7	-0.6	0.4	0.1	-0.4	0.2	-0.1	0.2	-0.1	0.1
0.1	0.2	0.6	0.6	0.6	-0.2	0.7	0.9	0.8	0.1	0.4	0.6	0.3	0.4	0.4	-0.3	0.2	0.6	0.2	-0.1	-0.0	0.1	-0.0	-0.3	0.2	-0.3	-0.2	-0.2	-0.4	0.0	-0.3	-0.1	-0.1	-0.1	0.5	0.4
0.1	0.0	0.1	0.0	-0.0	-0.5	0.2	0.8	1.0	1.2	0.9	0.2	-0.2	-0.4	-0.3	0.0	-0.1	0.3	-0.2	-0.3	-0.3	0.1	0.3	-0.3	0.0	-0.1	-0.1	-0.6	-0.6	0.4	0.8	1.0	0.8	0.3	0.7	0.3

Figure 19. SATOB 401 - 700 hPa mean RMS O-B vector differences (ms-1). OCTOBER 2005
All observations
Values are plotted where greater than 10 obs are present



3.7	3.7	3.7	3.7	3.8	3.7	3.7	3.7	3.6	3.7	3.7	3.8	3.9	3.9	3.9	3.9	3.8	3.8	3.6	3.6	3.6	3.6	3.6	3.5	3.7	3.8	3.8	3.8	3.8	3.8	4.0	3.8	3.7	3.7	3.6	3.6
3.7	3.8	3.7	3.8	3.9	3.9	3.8	3.8	3.9	3.9	4.0	4.1	4.1	4.2	4.4	4.2	4.3	4.2	4.2	3.9	3.9	3.8	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.9	3.7	3.7	3.6	3.5	3.6	3.5
3.7	4.2	4.0	4.4	4.4	4.0	3.8	4.2	4.2	3.9	4.0	3.9	4.1	4.4	4.1	5.2	5.6	4.8	4.3	4.1	3.9	3.9	3.9	3.7	3.8	4.1	4.0	3.9	3.9	3.7	3.9	3.7	3.7	3.8	3.9	3.8
4.8	4.3	4.1	4.0	4.5	4.9	4.6	4.3	4.4	4.5	4.4	4.3	4.5	4.3	5.2	7.2	6.9	7.4	8.1	6.2	7.6	6.7	6.4	6.1	6.5	6.4	5.3	6.7								
4.9	4.8	4.2	4.5	4.9	4.3	4.7	4.5	4.4	4.5	4.8	5.3	5.4	7.5	7.8	8.1	7.3	7.0	6.3	6.7	7.1	7.9	7.4	6.1	6.8	6.1	6.8	8.9	8.3	7.2	6.6	7.5	9.2	10.1	9.5	5.8
4.8	4.4	3.9	4.3	4.5	4.5	4.6	4.4	4.4	5.1	5.5	5.7	5.4	5.8	6.3	7.0	6.8	6.0	5.5	4.5	7.8	10.9	10.2	9.5	8.6	7.8	7.1	8.7	8.9	7.3	7.4	7.2	7.7	6.3	4.1	4.7
4.6	5.1	5.0	4.8	4.2	7.5	5.5	4.4	4.6	6.1	4.7	4.7	3.9	3.8	4.4	4.6	4.9	6.8	5.4	6.2	9.4	10.6	11.1	15.1	16.2	14.5	7.7	4.8	5.4	5.6	5.2	5.7		9.7	4.0	4.4
4.4	4.9	5.5	4.8	4.8	5.1	5.1	4.1	4.1	4.1	4.4	4.0	4.4	4.3	4.1	5.6	5.6	5.6	7.1	11.1	7.1	3.9	6.1	8.3	6.5	7.2	6.0	3.3	3.5	5.1	2.9					4.4
5.0	5.3	4.6	5.2	4.8	4.9	4.7	4.7	4.6	4.2	4.0	3.7	4.2	4.5	4.1	3.7	4.1	4.1	4.1	3.9	4.5	3.5	4.3	4.5	4.3	7.0	6.2	3.6	3.2	4.6						
6.7	5.7	5.6	6.3	7.9	6.3	6.8	6.6	6.4	6.8	4.4	4.4	4.5	5.2	5.9	7.1	12.5	9.0	4.8	4.3	4.1	4.6	4.7	4.8	4.2	5.2	5.1	3.2	4.0	4.5	5.8					
4.3	4.5	5.8	6.4	7.3	5.8	6.5	6.2	6.6	7.1	6.3	4.0	3.8	4.2	6.4	7.6	12.8	12.4	7.3	5.5	8.9	10.0	7.1	6.7	9.8	9.5	8.7	8.2	8.5	7.8	5.1	6.8	4.2	5.9		4.7
5.1	5.0	4.9	4.5	4.4	4.6	4.4	4.5	5.0	6.2	6.2	5.5	6.1	5.8	5.4	6.4	8.8	10.7	11.7	9.9	8.0	11.5	10.4	10.6	12.0	13.6	12.6	13.7	13.1	13.1	8.0	8.5	8.3	6.0	6.8	4.6
4.7	4.6	4.4	4.4	4.8	4.8	4.8	4.8	6.2	6.3	5.2	5.9	6.0	8.6	9.9	9.7	10.6	10.2	10.0	12.0	12.7	11.4	11.0	10.1	8.2	8.9	10.0	10.3	10.1	11.5	8.4	9.2	9.2	8.5	10.8	5.4
4.8	4.9	4.5	4.4	5.0	4.9	4.4	4.4	4.7	4.7	5.3	5.8	5.8	6.7	7.3	9.2	9.3	8.0	8.1	9.5	10.5	10.5	10.0	9.4	10.0	9.6	9.2	10.2	9.1	10.8	9.9	9.7	9.1	9.1	7.5	5.6
														7.8	7.5	6.9	6.7	6.9	7.5	7.7	8.6	8.3	7.4	7.7	7.9	7.2	7.3								
5.0	5.1	5.1	5.5	5.7	5.9	5.0	5.1	5.4	5.5	4.9	5.2	5.0	5.5	4.7	4.5	4.2	4.4	4.1	4.7	4.9	5.3	5.0	5.0	4.7	4.5	5.1	5.3	5.0	4.7	4.6	5.0	5.6	5.4	5.2	5.2
4.6	4.6	4.7	4.9	5.0	5.5	5.3	5.0	4.8	5.0	4.5	4.6	4.6	4.6	4.4	4.2	4.3	4.4	4.2	4.3	4.4	4.4	4.3	4.3	4.4	4.6	4.7	4.8	4.8	4.8	4.8	4.8	4.8	5.0	5.1	4.7
4.5	4.6	4.5	4.6	4.6	4.7	4.9	4.5	4.7	4.6	4.5	4.4	4.5	4.4	4.4	4.4	4.3	4.4	4.0	4.1	4.1	4.1	4.1	4.2	4.1	4.2	4.3	4.4	4.5	4.9	4.8	4.8	4.9	5.1	5.3	5.1

Figure 20. SATOB 101 - 400 hPa mean daily count. OCTOBER 2005
Global average number of observations in 24 hours = 259407



77	78	75	69	58	52	55	57	48	50	50	52	50	46	54	56	53	44	52	51	53	50	41	35	34	34	35	39	39	50	57	67	86	102	108	93
322	312	286	209	159	178	249	205	185	222	229	214	229	281	338	320	325	320	366	448	481	478	405	395	322	251	239	248	235	192	202	266	254	273	349	367
25	30	29	33	33	35	39	24	19	34	32	28	34	30	46	57	51	50	41	52	55	56	38	51	60	45	38	34	32	22	20	27	33	36	63	48
28	67	83	124	195	173	217	309	322	257	221	211	183	126	78	191	338	363	316	208	182	209	207	264	293	266	185	78	2		0	0	0	0		
480	502	423	450	503	540	745	851	923	545	534	620	406	538	718	622	583	599	481	444	517	554	581	433	370	418	344	237	142	47	58	73	120	204	200	147
388	617	462	480	495	354	623	910	806	469	762	1213	993	1356	1172	1226	826	738	694	872	671	464	443	267	165	327	512	644	648	379	130	150	176	141	91	255
533	789	621	422	335	167	395	749	412	1111	1696	1671	1384	1230	1212	1123	772	783	657	589	424	394	339	150	82	236	700	856	442	302	58	41	30	28	30	170
984	868	1096	945	567	656	772	1302	1094	1884	2185	1702	2484	1984	2051	1390	1261	1097	1137	1126	746	1046	609	796	977	1727	1667	1469	1138	811	125	26	28	28	38	136
800	818	766	574	635	564	400	1121	828	1212	1649	1478	1637	1362	1899	1388	1255	997	1619	1891	1960	1601	842	1075	1339	1723	1858	1942	1575	1148	303	29	28	23	16	16
352	215	98	34	34	65	30	117	185	410	997	935	1812	1269	452	409	365	277	515	1664	1881	1552	473	835	1500	1893	2229	2215	1662	1132	263	29	35	29	28	25
524	443	396	282	125	46	37	87	85	140	380	745	1271	1008	445	264	305	337	369	880	1143	551	564	561	699	975	1331	1128	848	474	64	32	43	42	49	109
432	451	635	643	534	306	476	541	287	79	90	217	1008	1605	1231	947	711	737	604	804	1136	894	541	373	221	271	348	333	246	106	16	32	59	78	90	307
296	304	323	470	521	577	814	540	406	258	245	223	377	880	1103	1232	843	762	703	934	1065	1160	1068	731	604	572	475	379	343	153	30	57	69	66	85	276
78	72	51	48	64	152	333	284	402	336	214	200	179	330	499	430	387	417	426	547	840	864	660	451	406	370	344	269	213	61	54	56	59	53	38	35
						0							0	46	127	183	208	207	185	190	220	192	206	177	143	114	62	1							
30	24	16	21	20	14	25	36	46	34	38	47	39	36	30	19	17	16	8	4	5	12	21	24	18	24	25	20	18	17	42	43	30	30	25	24
210	218	194	234	303	342	445	446	433	372	423	381	302	316	241	192	211	235	192	267	304	331	291	181	121	143	284	416	258	218	218	164	142	159	197	170
85	91	99	110	115	122	129	123	120	101	93	91	82	67	56	59	66	64	73	86	95	107	129	133	168	184	162	125	100	91	87	80	84	90	86	81

Figure 21. SATOB 101 - 400 hPa vector mean wind. OCTOBER 2005
All observations
Arrows are plotted where greater than 10 obs are present

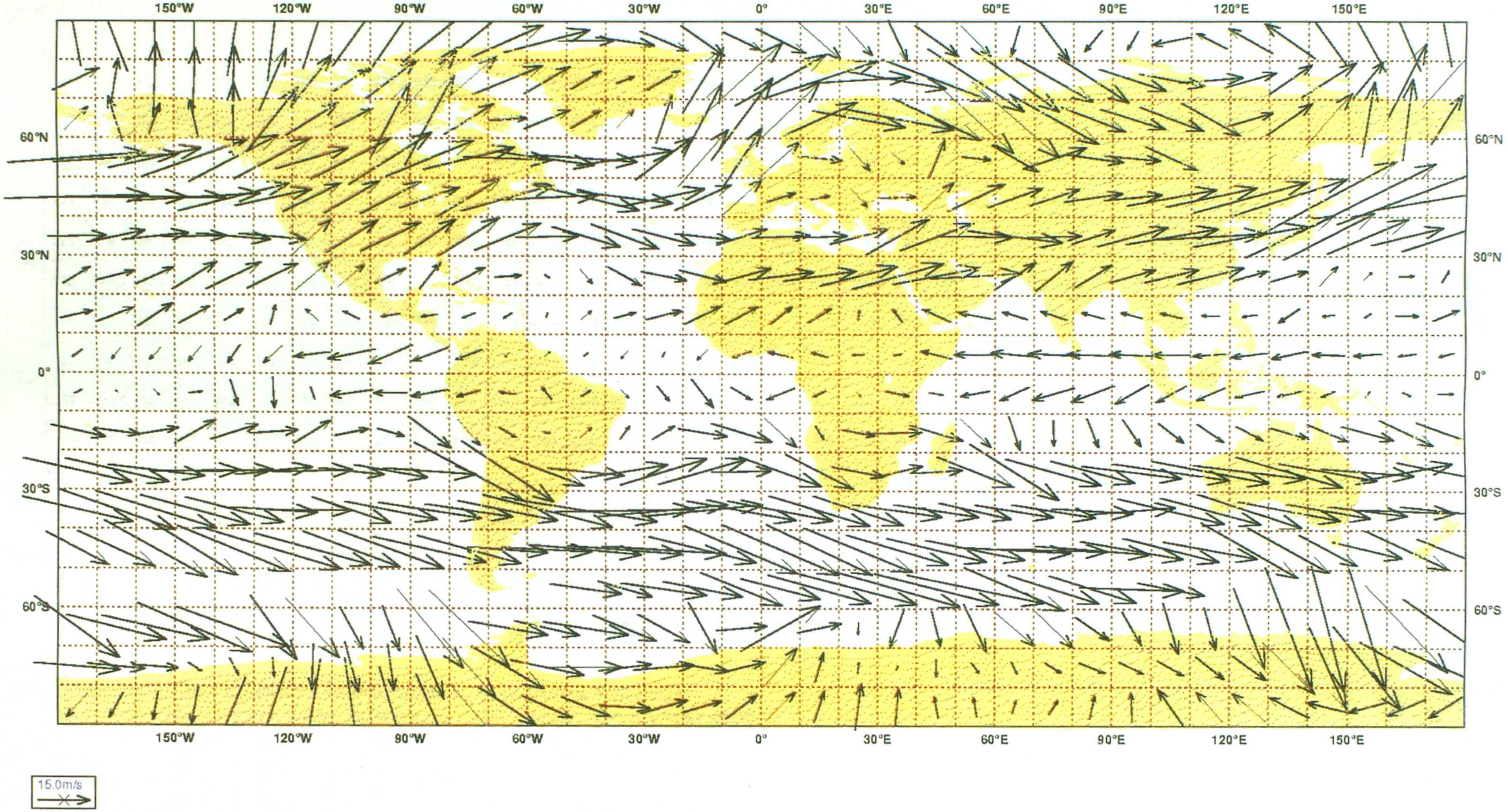

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 22. SATOB 101 - 400 hPa mean vector wind differences. OCTOBER 2005
All observations
Arrows are plotted where greater than 10 obs are present

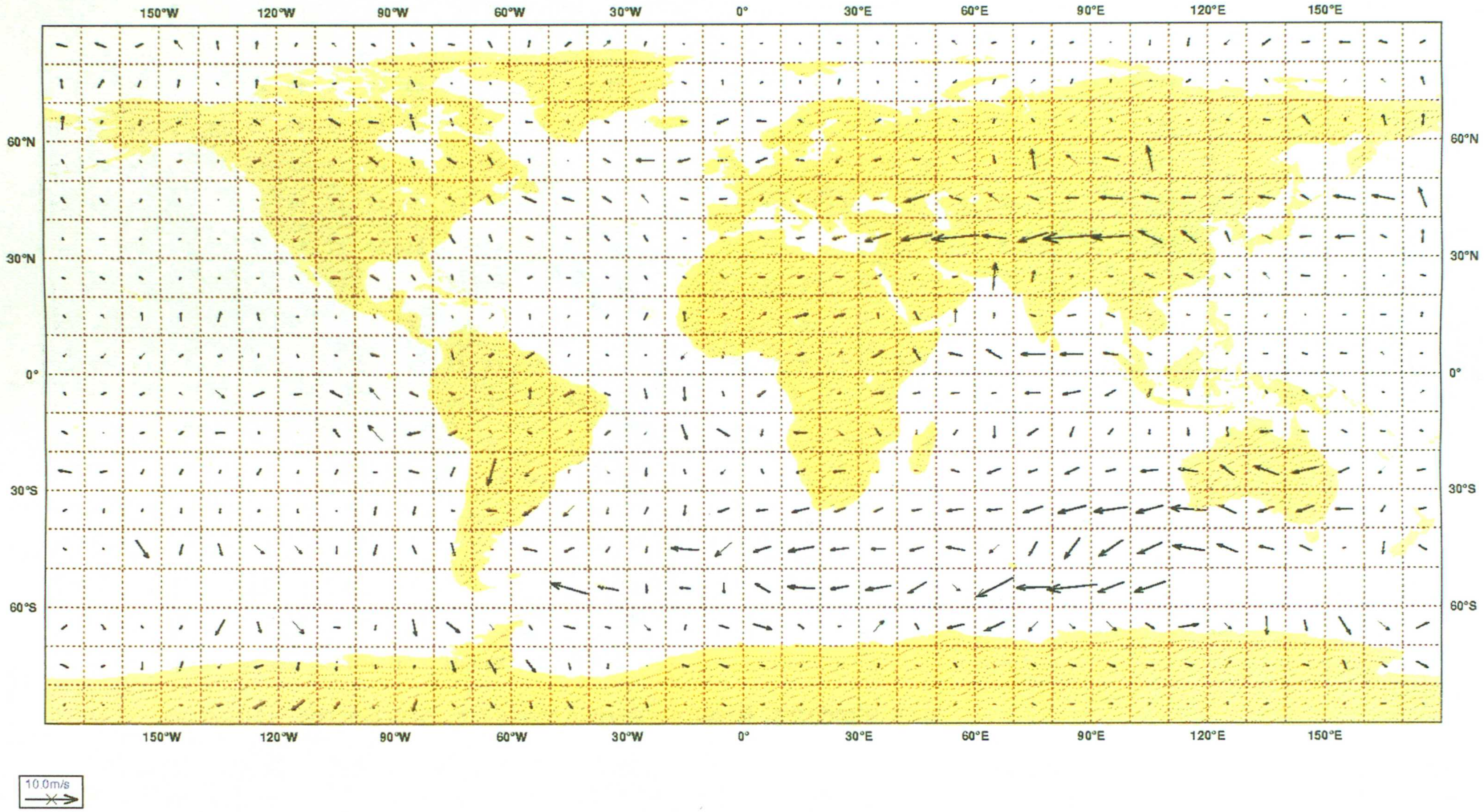
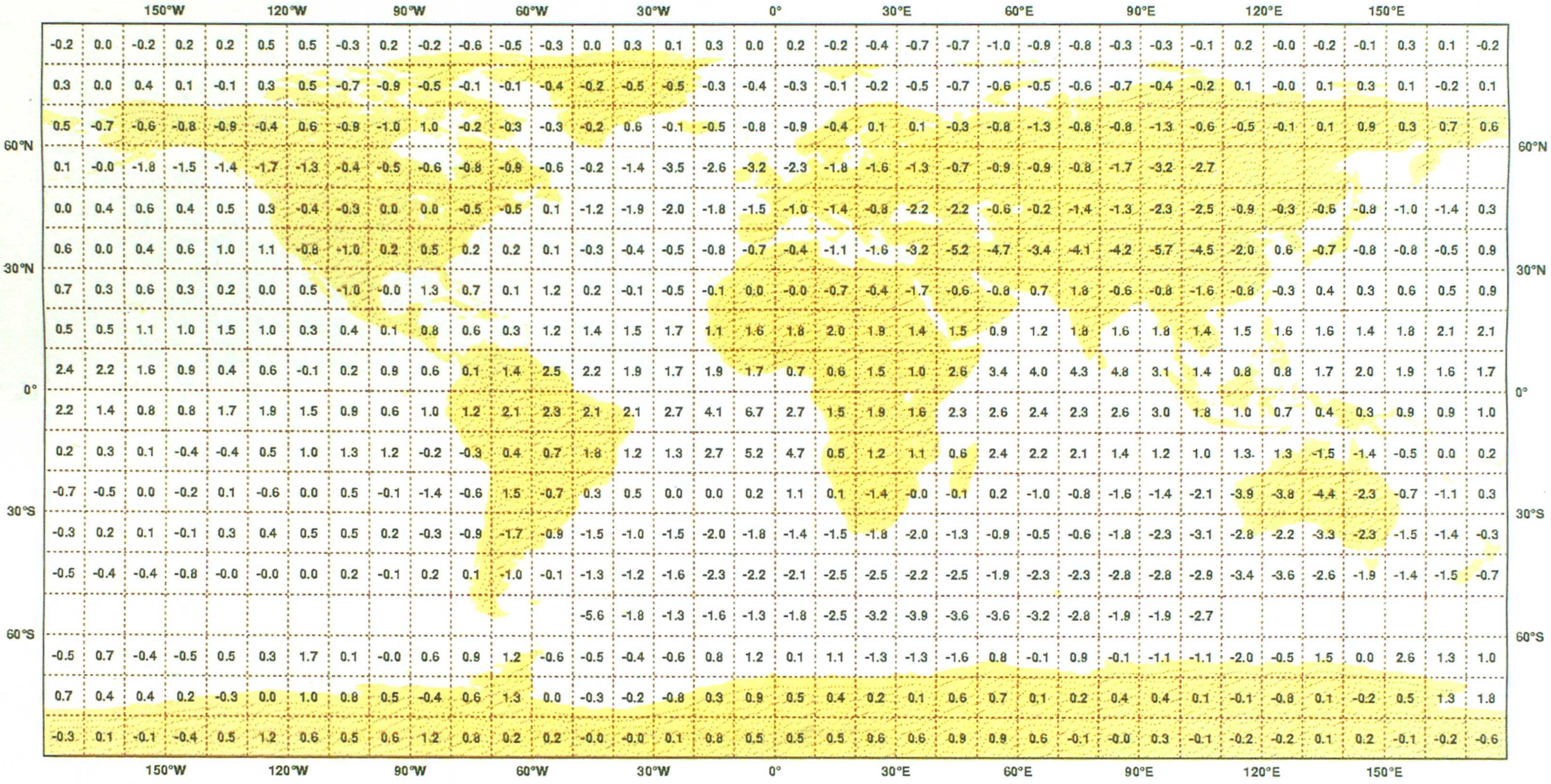
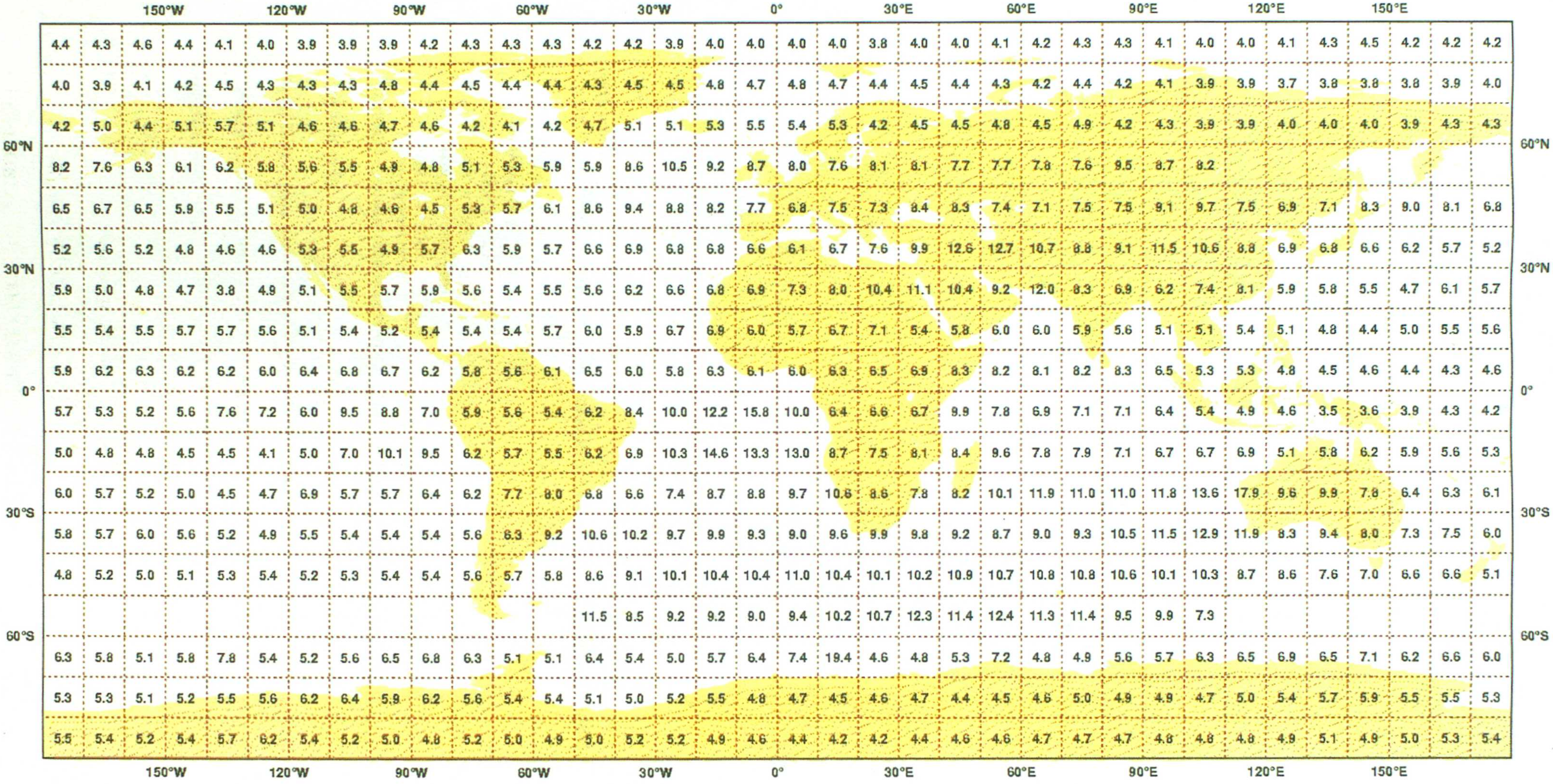

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
10.0m/s

Figure 23. SATOB 101 - 400 hPa mean O-B speed differences (ms-1). OCTOBER 2005
All observations
Values are plotted where greater than 10 obs are present



-0.2	0.0	-0.2	0.2	0.2	0.5	0.5	-0.3	0.2	-0.2	-0.6	-0.5	-0.3	0.0	0.3	0.1	0.3	0.0	0.2	-0.2	-0.4	-0.7	-0.7	-1.0	-0.9	-0.8	-0.3	-0.3	-0.1	0.2	-0.0	-0.2	-0.1	0.3	0.1	-0.2
0.3	0.0	0.4	0.1	-0.1	0.3	0.5	-0.7	-0.9	-0.5	-0.1	-0.1	-0.4	-0.2	-0.5	-0.5	-0.3	-0.4	-0.3	-0.1	-0.2	-0.5	-0.7	-0.6	-0.5	-0.6	-0.7	-0.4	-0.2	0.1	-0.0	0.1	0.3	0.1	-0.2	0.1
0.5	-0.7	-0.6	-0.8	-0.9	-0.4	0.6	-0.9	-1.0	1.0	-0.2	-0.3	-0.3	-0.2	0.6	-0.1	-0.5	-0.8	-0.9	-0.4	0.1	0.1	-0.3	-0.8	-1.3	-0.8	-0.8	-1.3	-0.6	-0.5	-0.1	0.1	0.9	0.3	0.7	0.6
0.1	-0.0	-1.8	-1.5	-1.4	-1.7	-1.3	-0.4	-0.5	-0.6	-0.8	-0.9	-0.6	-0.2	-1.4	-3.5	-2.6	-3.2	-2.3	-1.8	-1.6	-1.3	-0.7	-0.9	-0.9	-0.8	-1.7	-3.2	-2.7							
0.0	0.4	0.6	0.4	0.5	0.3	-0.4	-0.3	0.0	0.0	-0.5	-0.5	0.1	-1.2	-1.9	-2.0	-1.8	-1.5	-1.0	-1.4	-0.8	-2.2	-2.2	-0.6	-0.2	-1.4	-1.3	-2.3	-2.5	-0.9	-0.3	-0.6	-0.8	-1.0	-1.4	0.3
0.6	0.0	0.4	0.6	1.0	1.1	-0.8	-1.0	0.2	0.5	0.2	0.2	0.1	-0.3	-0.4	-0.5	-0.8	-0.7	-0.4	-1.1	-1.6	-3.2	-5.2	-4.7	-3.4	-4.1	-4.2	-5.7	-4.5	-2.0	0.6	-0.7	-0.8	-0.8	-0.5	0.9
0.7	0.3	0.6	0.3	0.2	0.0	0.5	-1.0	-0.0	1.3	0.7	0.1	1.2	0.2	-0.1	-0.5	-0.1	0.0	-0.0	-0.7	-0.4	-1.7	-0.6	-0.8	0.7	1.8	-0.6	-0.8	-1.6	-0.8	-0.3	0.4	0.3	0.6	0.5	0.9
0.5	0.5	1.1	1.0	1.5	1.0	0.3	0.4	0.1	0.8	0.6	0.3	1.2	1.4	1.5	1.7	1.1	1.6	1.8	2.0	1.9	1.4	1.5	0.9	1.2	1.8	1.6	1.8	1.4	1.5	1.6	1.6	1.4	1.8	2.1	2.1
2.4	2.2	1.6	0.9	0.4	0.6	-0.1	0.2	0.9	0.6	0.1	1.4	2.5	2.2	1.9	1.7	1.9	1.7	0.7	0.6	1.5	1.0	2.6	3.4	4.0	4.3	4.8	3.1	1.4	0.8	0.8	1.7	2.0	1.9	1.6	1.7
2.2	1.4	0.8	0.8	1.7	1.9	1.5	0.9	0.6	1.0	1.2	2.1	2.3	2.1	2.1	2.7	4.1	6.7	2.7	1.5	1.9	1.6	2.3	2.6	2.4	2.3	2.6	3.0	1.8	1.0	0.7	0.4	0.3	0.9	0.9	1.0
0.2	0.3	0.1	-0.4	-0.4	0.5	1.0	1.3	1.2	-0.2	-0.3	0.4	0.7	1.8	1.2	1.3	2.7	5.2	4.7	0.5	1.2	1.1	0.6	2.4	2.2	2.1	1.4	1.2	1.0	1.3	1.3	-1.5	-1.4	-0.5	0.0	0.2
-0.7	-0.5	0.0	-0.2	0.1	-0.6	0.0	0.5	-0.1	-1.4	-0.6	1.5	-0.7	0.3	0.5	0.0	0.0	0.2	1.1	0.1	-1.4	-0.0	-0.1	0.2	-1.0	-0.8	-1.6	-1.4	-2.1	-3.9	-3.8	-4.4	-2.3	-0.7	-1.1	0.3
-0.3	0.2	0.1	-0.1	0.3	0.4	0.5	0.5	0.2	-0.3	-0.9	-1.7	-0.9	-1.5	-1.0	-1.5	-2.0	-1.8	-1.4	-1.5	-1.8	-2.0	-1.3	-0.9	-0.5	-0.6	-1.8	-2.3	-3.1	-2.8	-2.2	-3.3	-2.3	-1.5	-1.4	-0.3
-0.5	-0.4	-0.4	-0.8	-0.0	-0.0	0.0	0.2	-0.1	0.2	0.1	-1.0	-0.1	-1.3	-1.2	-1.6	-2.3	-2.2	-2.1	-2.5	-2.5	-2.2	-2.5	-1.9	-2.3	-2.3	-2.8	-2.8	-2.9	-3.4	-3.6	-2.6	-1.9	-1.4	-1.5	-0.7
													-5.6	-1.8	-1.3	-1.6	-1.3	-1.8	-2.5	-3.2	-3.9	-3.6	-3.6	-3.2	-2.8	-1.9	-1.9	-2.7							
-0.5	0.7	-0.4	-0.5	0.5	0.3	1.7	0.1	-0.0	0.6	0.9	1.2	-0.6	-0.5	-0.4	-0.6	0.8	1.2	0.1	1.1	-1.3	-1.3	-1.6	0.8	-0.1	0.9	-0.1	-1.1	-1.1	-2.0	-0.5	1.5	0.0	2.6	1.3	1.0
0.7	0.4	0.4	0.2	-0.3	0.0	1.0	0.8	0.5	-0.4	0.6	1.3	0.0	-0.3	-0.2	-0.8	0.3	0.9	0.5	0.4	0.2	0.1	0.6	0.7	0.1	0.2	0.4	0.4	0.1	-0.1	-0.8	0.1	-0.2	0.5	1.3	1.8
-0.3	0.1	-0.1	-0.4	0.5	1.2	0.6	0.5	0.6	1.2	0.8	0.2	0.2	-0.0	-0.0	0.1	0.8	0.5	0.5	0.5	0.6	0.6	0.9	0.9	0.6	-0.1	-0.0	0.3	-0.1	-0.2	-0.2	0.1	0.2	-0.1	-0.2	-0.6

Figure 24. SATOB 101 - 400 hPa mean RMS O-B vector differences (ms-1). OCTOBER 2005
All observations
Values are plotted where greater than 10 obs are present



4.4	4.3	4.6	4.4	4.1	4.0	3.9	3.9	3.9	4.2	4.3	4.3	4.3	4.2	4.2	3.9	4.0	4.0	4.0	4.0	3.8	4.0	4.0	4.1	4.2	4.3	4.3	4.1	4.0	4.0	4.1	4.3	4.5	4.2	4.2	4.2
4.0	3.9	4.1	4.2	4.5	4.3	4.3	4.3	4.8	4.4	4.5	4.4	4.4	4.3	4.5	4.5	4.8	4.7	4.8	4.7	4.4	4.5	4.4	4.3	4.2	4.4	4.2	4.1	3.9	3.9	3.7	3.8	3.8	3.8	3.9	4.0
4.2	5.0	4.4	5.1	5.7	5.1	4.6	4.6	4.7	4.6	4.2	4.1	4.2	4.7	5.1	5.1	5.3	5.5	5.4	5.3	4.2	4.5	4.5	4.8	4.5	4.9	4.2	4.3	3.9	3.9	4.0	4.0	4.0	3.9	4.3	4.3
8.2	7.6	6.3	6.1	6.2	5.8	5.6	5.5	4.9	4.8	5.1	5.3	5.9	5.9	8.6	10.5	9.2	8.7	8.0	7.6	8.1	8.1	7.7	7.7	7.8	7.6	9.5	8.7	8.2							
6.5	6.7	6.5	5.9	5.5	5.1	5.0	4.8	4.6	4.5	5.3	5.7	6.1	8.6	9.4	8.8	8.2	7.7	6.8	7.5	7.3	8.4	8.3	7.4	7.1	7.5	7.5	9.1	9.7	7.5	6.9	7.1	8.3	9.0	8.1	6.8
5.2	5.6	5.2	4.8	4.6	4.6	5.3	5.5	4.9	5.7	6.3	5.9	5.7	6.6	6.9	6.8	6.8	6.6	6.1	6.7	7.6	9.9	12.6	12.7	10.7	8.8	9.1	11.5	10.6	8.8	6.9	6.8	6.6	6.2	5.7	5.2
5.9	5.0	4.8	4.7	3.8	4.9	5.1	5.5	5.7	5.9	5.6	5.4	5.5	5.6	6.2	6.6	6.8	6.9	7.3	8.0	10.4	11.1	10.4	9.2	12.0	8.3	6.9	6.2	7.4	8.1	5.9	5.8	5.5	4.7	6.1	5.7
5.5	5.4	5.5	5.7	5.7	5.6	5.1	5.4	5.2	5.4	5.4	5.4	5.7	6.0	5.9	6.7	6.9	6.0	5.7	6.7	7.1	5.4	5.8	6.0	6.0	5.9	5.6	5.1	5.1	5.4	5.1	4.8	4.4	5.0	5.5	5.6
5.9	6.2	6.3	6.2	6.2	6.0	6.4	6.8	6.7	6.2	5.8	5.6	6.1	6.5	6.0	5.8	6.3	6.1	6.0	6.3	6.5	6.9	8.3	8.2	8.1	8.2	8.3	6.5	5.3	5.3	4.8	4.5	4.6	4.4	4.3	4.6
5.7	5.3	5.2	5.6	7.6	7.2	6.0	9.5	8.8	7.0	5.9	5.6	5.4	6.2	8.4	10.0	12.2	15.8	10.0	6.4	6.6	6.7	9.9	7.8	6.9	7.1	7.1	6.4	5.4	4.9	4.6	3.5	3.6	3.9	4.3	4.2
5.0	4.8	4.8	4.5	4.5	4.1	5.0	7.0	10.1	9.5	6.2	5.7	5.5	6.2	6.9	10.3	14.6	13.3	13.0	8.7	7.5	8.1	8.4	9.6	7.8	7.9	7.1	6.7	6.7	6.9	5.1	5.8	6.2	5.9	5.6	5.3
6.0	5.7	5.2	5.0	4.5	4.7	6.9	5.7	5.7	6.4	6.2	7.7	8.0	6.8	6.6	7.4	8.7	8.8	9.7	10.6	8.6	7.8	8.2	10.1	11.9	11.0	11.0	11.8	13.6	17.9	9.6	9.9	7.8	6.4	6.3	6.1
5.8	5.7	6.0	5.6	5.2	4.9	5.5	5.4	5.4	5.4	5.6	6.3	9.2	10.6	10.2	9.7	9.9	9.3	9.0	9.6	9.9	9.8	9.2	8.7	9.0	9.3	10.5	11.5	12.9	11.9	8.3	9.4	8.0	7.3	7.5	6.0
4.8	5.2	5.0	5.1	5.3	5.4	5.2	5.3	5.4	5.4	5.6	5.7	5.8	8.6	9.1	10.1	10.4	10.4	11.0	10.4	10.1	10.2	10.9	10.7	10.8	10.8	10.6	10.1	10.3	8.7	8.6	7.6	7.0	6.6	6.6	5.1
													11.5	8.5	9.2	9.2	9.0	9.4	10.2	10.7	12.3	11.4	12.4	11.3	11.4	9.5	9.9	7.3							
6.3	5.8	5.1	5.8	7.8	5.4	5.2	5.6	6.5	6.8	6.3	5.1	5.1	6.4	5.4	5.0	5.7	6.4	7.4	19.4	4.6	4.8	5.3	7.2	4.8	4.9	5.6	5.7	6.3	6.5	6.9	6.5	7.1	6.2	6.6	6.0
5.3	5.3	5.1	5.2	5.5	5.6	6.2	6.4	5.9	6.2	5.6	5.4	5.4	5.1	5.0	5.2	5.5	4.8	4.7	4.5	4.6	4.7	4.4	4.5	4.6	5.0	4.9	4.9	4.7	5.0	5.4	5.7	5.9	5.5	5.5	5.3
5.5	5.4	5.2	5.4	5.7	6.2	5.4	5.2	5.0	4.8	5.2	5.0	4.9	5.0	5.2	5.2	4.9	4.6	4.4	4.2	4.2	4.4	4.6	4.6	4.7	4.7	4.7	4.8	4.8	4.8	4.9	5.1	4.9	5.0	5.3	5.4

MONITORING OF SATELLITE TEMPERATURES

MONITORING CENTRE: EXETER

MONTH: Oct 05

Monitoring procedures

Period :One calendar month.

Data monitored :Reports from NOAA-15, NOAA-16 and NOAA-17.

Standard of comparison :Background field from UKMO global model.

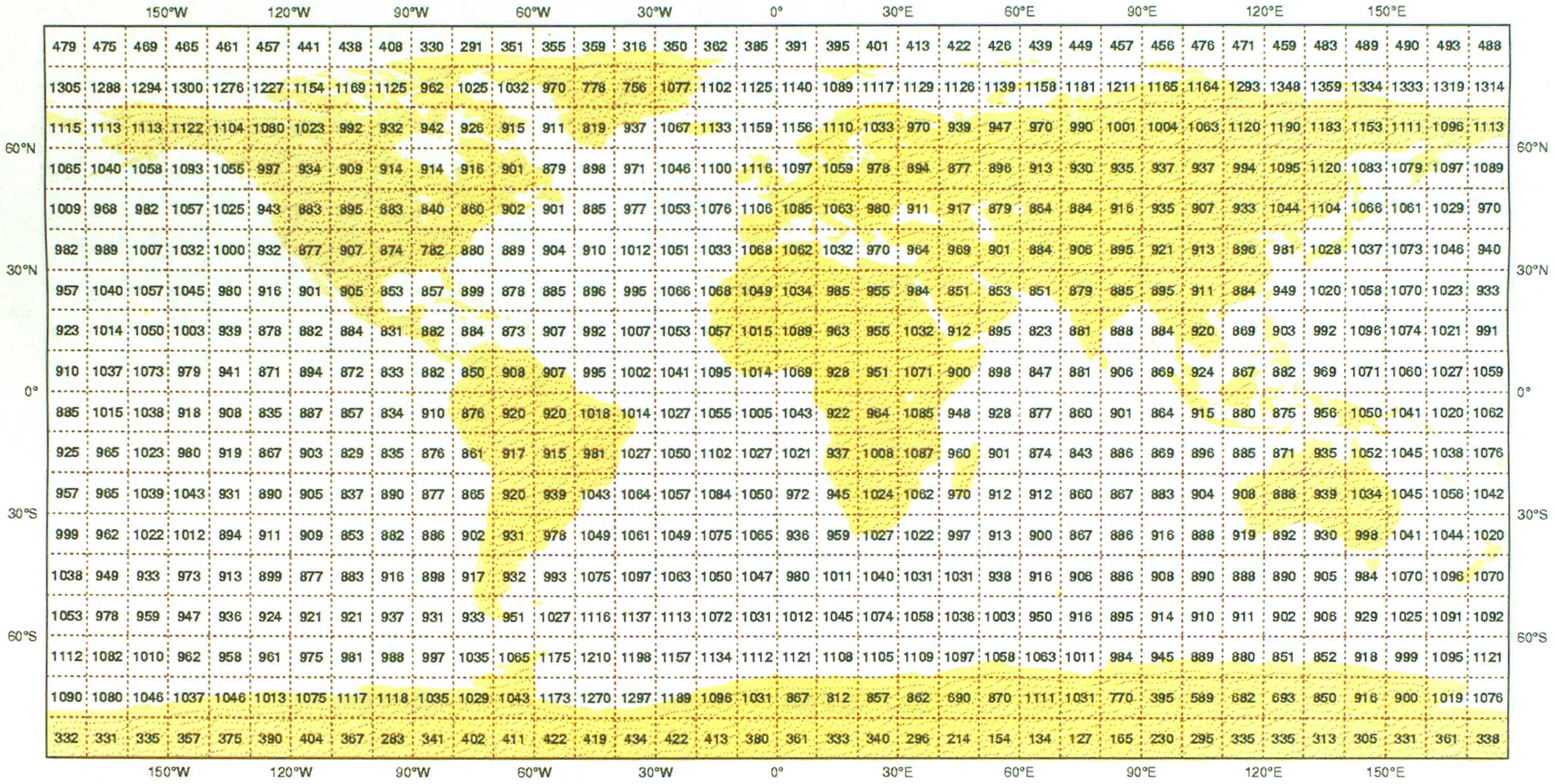
Selection Criteria :All soundings.

Data Extracted :Sounding channels (and approximate weighting function peaks, hPa)

- HIRS8 (Surface)
- HIRS15 (700)
- HIRS11 (500-700)
- HIRS4 (400)
- AMSUA5 (700)
- AMSUA7 (300)
- AMSUA9 (100)

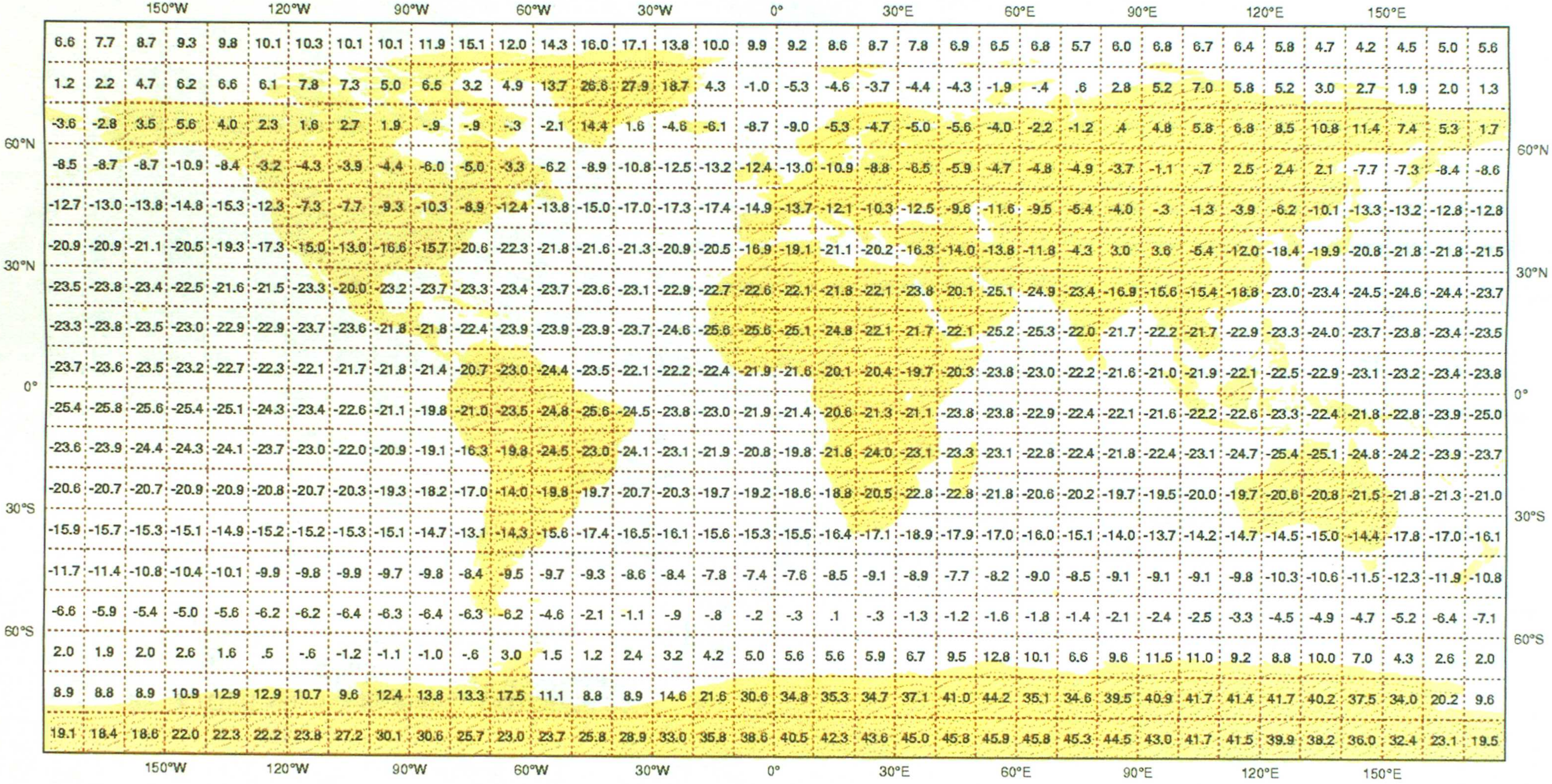
:Mean and standard deviation observation-minus-background brightness temperature differences

Figure 25. ATOVS mean daily count. OCTOBER 2005
NOAA15, using all observations
Global average number of observations in 24 hours = 594494



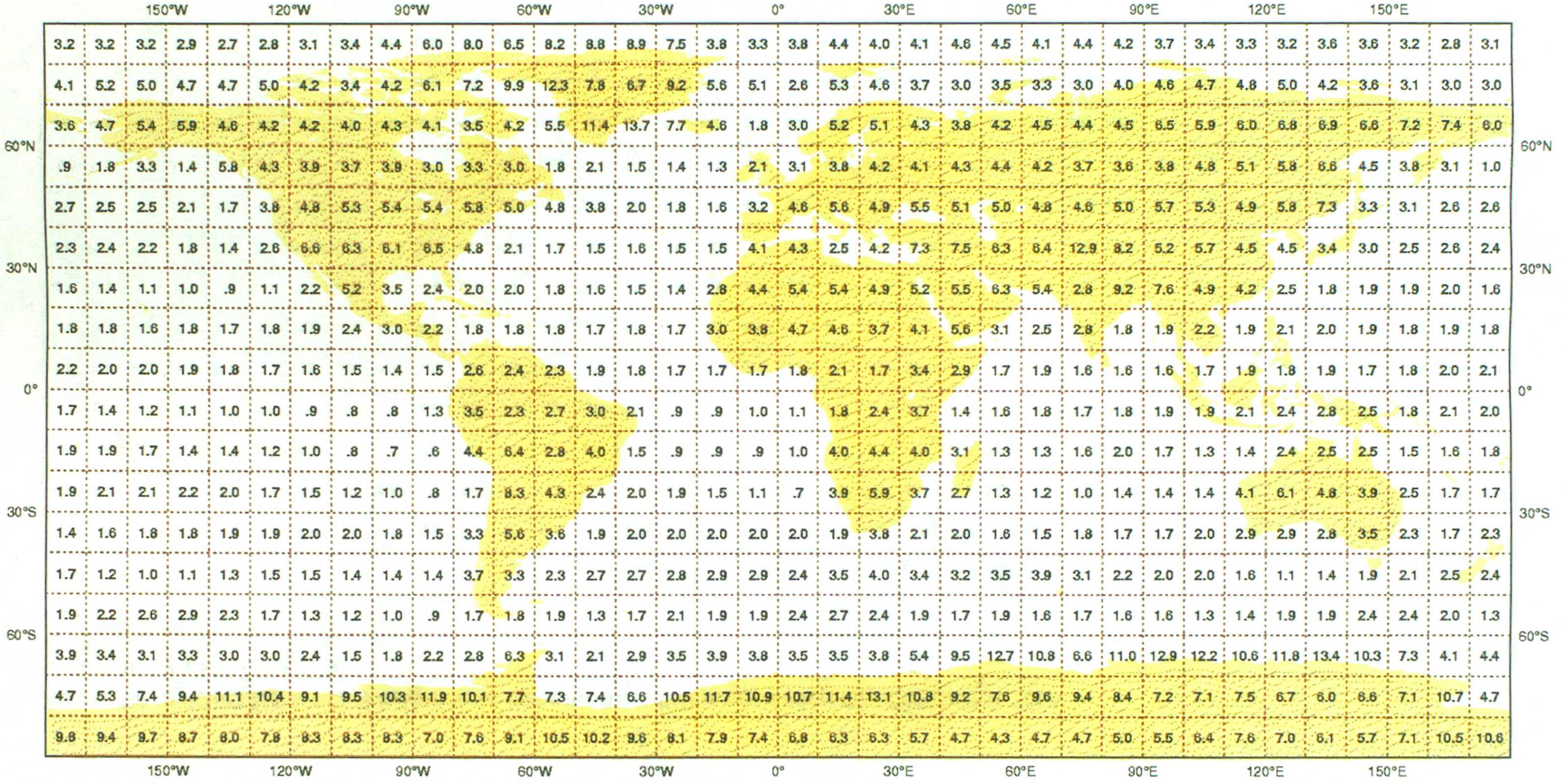
479	475	469	465	461	457	441	438	408	330	291	351	355	359	316	350	362	385	391	395	401	413	422	426	439	449	457	456	476	471	459	483	489	490	493	488
1305	1288	1294	1300	1276	1227	1154	1169	1125	962	1025	1032	970	778	756	1077	1102	1125	1140	1089	1117	1129	1126	1139	1158	1181	1211	1165	1164	1293	1348	1359	1334	1333	1319	1314
1115	1113	1113	1122	1104	1080	1023	992	932	942	926	915	911	819	937	1067	1133	1159	1156	1110	1033	970	939	947	970	990	1001	1004	1063	1120	1190	1183	1153	1111	1096	1113
1065	1040	1058	1093	1055	997	934	909	914	914	916	901	879	898	971	1046	1100	1116	1097	1059	978	894	877	896	913	930	935	937	937	994	1095	1120	1083	1079	1097	1089
1009	968	982	1057	1025	943	883	895	883	840	860	902	901	885	977	1053	1076	1106	1085	1063	980	911	917	879	864	884	916	935	907	933	1044	1104	1066	1061	1029	970
982	989	1007	1032	1000	932	877	907	874	782	880	889	904	910	1012	1051	1033	1068	1062	1032	970	964	969	901	884	906	895	921	913	896	981	1028	1037	1073	1046	940
957	1040	1057	1045	980	916	901	905	853	857	899	878	885	896	995	1066	1068	1049	1034	985	955	984	851	853	851	879	885	895	911	884	949	1020	1058	1070	1023	933
923	1014	1050	1003	939	878	882	884	831	882	884	873	907	992	1007	1053	1057	1015	1089	963	955	1032	912	895	823	881	888	884	920	869	903	992	1096	1074	1021	991
910	1037	1073	979	941	871	894	872	833	882	850	908	907	995	1002	1041	1095	1014	1069	928	951	1071	900	898	847	881	906	869	924	867	882	969	1071	1060	1027	1059
885	1015	1038	918	908	835	887	857	834	910	876	920	920	1018	1014	1027	1055	1005	1043	922	964	1085	948	928	877	860	901	864	915	880	875	956	1050	1041	1020	1062
925	965	1023	980	919	867	903	829	835	876	861	917	915	981	1027	1050	1102	1027	1021	937	1008	1087	960	901	874	843	886	869	896	885	871	935	1052	1045	1038	1076
957	965	1039	1043	931	890	905	837	890	877	865	920	939	1043	1064	1057	1084	1050	972	945	1024	1062	970	912	912	860	867	883	904	908	888	939	1034	1045	1056	1042
999	962	1022	1012	894	911	909	853	882	886	902	931	978	1049	1061	1049	1075	1065	936	959	1027	1022	997	913	900	867	886	916	888	919	892	930	998	1041	1044	1020
1038	949	933	973	913	899	877	883	916	898	917	932	993	1075	1097	1063	1050	1047	980	1011	1040	1031	1031	938	916	906	886	908	890	888	890	905	984	1070	1096	1070
1053	978	959	947	936	924	921	921	937	931	933	951	1027	1116	1137	1113	1072	1031	1012	1045	1074	1058	1036	1003	950	916	895	914	910	911	902	906	929	1025	1091	1092
1112	1082	1010	962	958	961	975	981	988	997	1035	1065	1175	1210	1198	1157	1134	1112	1121	1108	1105	1109	1097	1058	1063	1011	984	945	889	880	851	852	918	999	1095	1121
1090	1080	1046	1037	1046	1013	1075	1117	1118	1035	1029	1043	1173	1270	1297	1189	1096	1031	867	812	857	862	690	870	1111	1031	770	395	589	682	693	850	916	900	1019	1076
332	331	335	357	375	390	404	367	283	341	402	411	422	419	434	422	413	380	361	333	340	296	214	154	134	127	165	230	295	335	335	313	305	331	361	338

Figure 26. ATOVS MEAN O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS8 (Surface)
NOAA15, using all observations



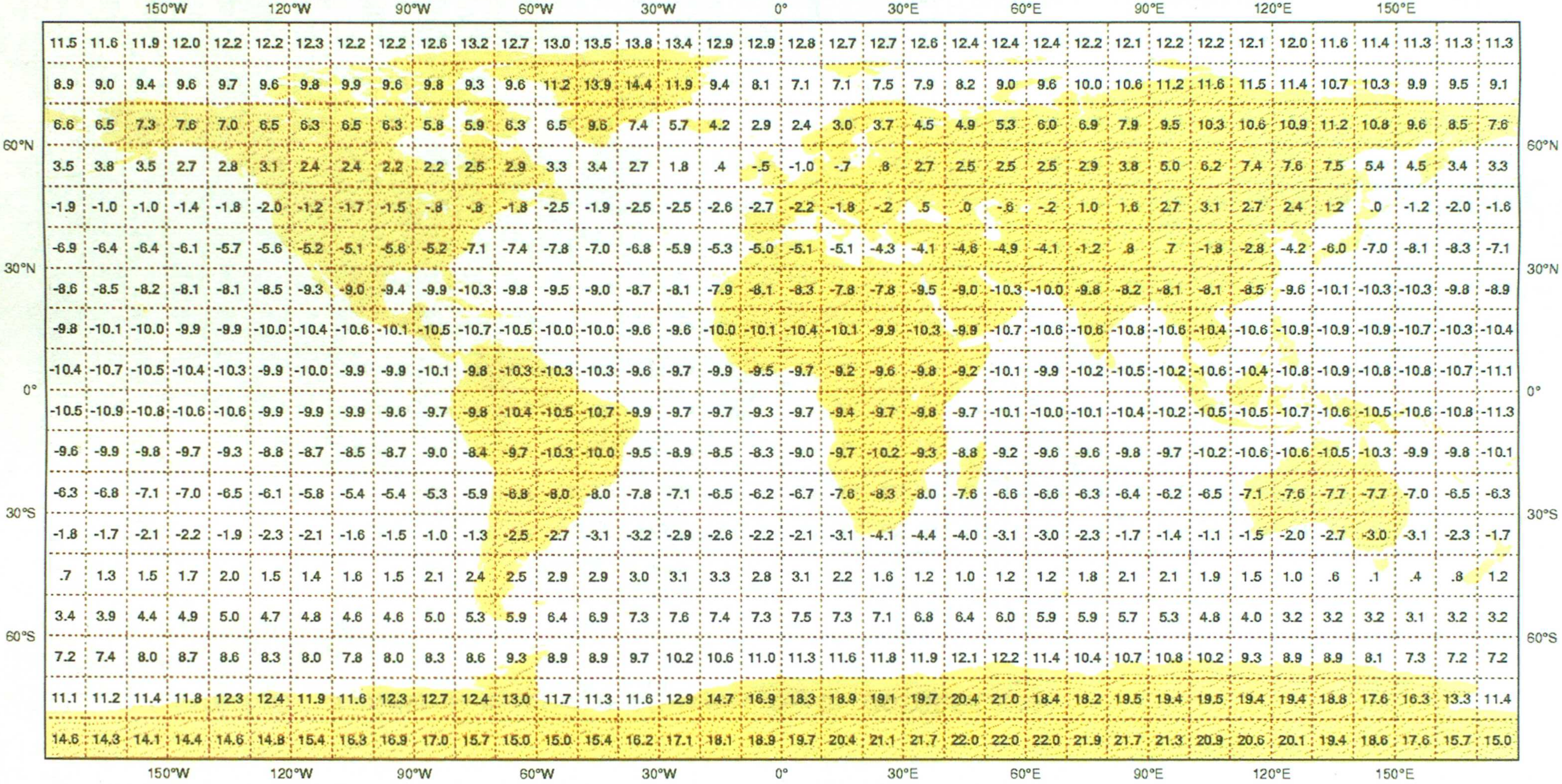
6.6	7.7	8.7	9.3	9.8	10.1	10.3	10.1	10.1	11.9	15.1	12.0	14.3	16.0	17.1	13.8	10.0	9.9	9.2	8.6	8.7	7.8	6.9	6.5	6.8	5.7	6.0	6.8	6.7	6.4	5.8	4.7	4.2	4.5	5.0	5.6
1.2	2.2	4.7	6.2	6.6	6.1	7.8	7.3	5.0	6.5	3.2	4.9	13.7	26.6	27.9	18.7	4.3	-1.0	-5.3	-4.6	-3.7	-4.4	-4.3	-1.9	-.4	.6	2.8	5.2	7.0	5.8	5.2	3.0	2.7	1.9	2.0	1.3
-3.6	-2.8	3.5	5.6	4.0	2.3	1.6	2.7	1.9	-.9	-.9	-.3	-2.1	14.4	1.6	-4.6	-6.1	-8.7	-9.0	-5.3	-4.7	-5.0	-5.6	-4.0	-2.2	-1.2	.4	4.8	5.8	6.8	8.5	10.8	11.4	7.4	5.3	1.7
-8.5	-8.7	-8.7	-10.9	-8.4	-3.2	-4.3	-3.9	-4.4	-6.0	-5.0	-3.3	-6.2	-8.9	-10.8	-12.5	-13.2	-12.4	-13.0	-10.9	-8.8	-6.5	-5.9	-4.7	-4.8	-4.9	-3.7	-1.1	-.7	2.5	2.4	2.1	-7.7	-7.3	-8.4	-8.6
-12.7	-13.0	-13.8	-14.8	-15.3	-12.3	-7.3	-7.7	-9.3	-10.3	-8.9	-12.4	-13.8	-15.0	-17.0	-17.3	-17.4	-14.9	-13.7	-12.1	-10.3	-12.5	-9.6	-11.6	-9.5	-5.4	-4.0	-.3	-1.3	-3.9	-6.2	-10.1	-13.3	-13.2	-12.8	-12.8
-20.9	-20.9	-21.1	-20.5	-19.3	-17.3	-15.0	-13.0	-16.6	-15.7	-20.6	-22.3	-21.8	-21.6	-21.3	-20.9	-20.5	-16.9	-19.1	-21.1	-20.2	-16.3	-14.0	-13.8	-11.8	-4.3	3.0	3.6	-5.4	-12.0	-18.4	-19.9	-20.8	-21.8	-21.8	-21.5
-23.5	-23.8	-23.4	-22.5	-21.6	-21.5	-23.3	-20.0	-23.2	-23.7	-23.3	-23.4	-23.7	-23.6	-23.1	-22.9	-22.7	-22.6	-22.1	-21.8	-22.1	-23.8	-20.1	-25.1	-24.9	-23.4	-16.9	-15.6	-15.4	-18.8	-23.0	-23.4	-24.5	-24.6	-24.4	-23.7
-23.3	-23.8	-23.5	-23.0	-22.9	-22.9	-23.7	-23.6	-21.8	-21.8	-22.4	-23.9	-23.9	-23.9	-23.7	-24.6	-25.6	-25.6	-25.1	-24.8	-22.1	-21.7	-22.1	-25.2	-25.3	-22.0	-21.7	-22.2	-21.7	-22.9	-23.3	-24.0	-23.7	-23.8	-23.4	-23.5
-23.7	-23.6	-23.5	-23.2	-22.7	-22.3	-22.1	-21.7	-21.8	-21.4	-20.7	-23.0	-24.4	-23.5	-22.1	-22.2	-22.4	-21.9	-21.6	-20.1	-20.4	-19.7	-20.3	-23.8	-23.0	-22.2	-21.6	-21.0	-21.9	-22.1	-22.5	-22.9	-23.1	-23.2	-23.4	-23.8
-25.4	-25.8	-25.6	-25.4	-25.1	-24.3	-23.4	-22.6	-21.1	-19.8	-21.0	-23.5	-24.8	-25.6	-24.5	-23.8	-23.0	-21.9	-21.4	-20.6	-21.3	-21.1	-23.8	-23.8	-22.9	-22.4	-22.1	-21.6	-22.2	-22.6	-23.3	-22.4	-21.8	-22.8	-23.9	-25.0
-23.6	-23.9	-24.4	-24.3	-24.1	-23.7	-23.0	-22.0	-20.9	-19.1	-16.3	-19.8	-24.5	-23.0	-24.1	-23.1	-21.9	-20.8	-19.8	-21.8	-24.0	-23.1	-23.3	-23.1	-22.8	-22.4	-21.8	-22.4	-23.1	-24.7	-25.4	-25.1	-24.8	-24.2	-23.9	-23.7
-20.6	-20.7	-20.7	-20.9	-20.9	-20.8	-20.7	-20.3	-19.3	-18.2	-17.0	-14.0	-19.8	-19.7	-20.7	-20.3	-19.7	-19.2	-18.6	-18.8	-20.5	-22.8	-22.8	-21.8	-20.6	-20.2	-19.7	-19.5	-20.0	-19.7	-20.6	-20.8	-21.5	-21.8	-21.3	-21.0
-15.9	-15.7	-15.3	-15.1	-14.9	-15.2	-15.2	-15.3	-15.1	-14.7	-13.1	-14.3	-15.6	-17.4	-16.5	-16.1	-15.6	-15.3	-15.5	-16.4	-17.1	-18.9	-17.9	-17.0	-16.0	-15.1	-14.0	-13.7	-14.2	-14.7	-14.5	-15.0	-14.4	-17.8	-17.0	-16.1
-11.7	-11.4	-10.8	-10.4	-10.1	-9.9	-9.8	-9.9	-9.7	-9.8	-8.4	-9.5	-9.7	-9.3	-8.6	-8.4	-7.8	-7.4	-7.6	-8.5	-9.1	-8.9	-7.7	-8.2	-9.0	-8.5	-9.1	-9.1	-9.1	-9.8	-10.3	-10.6	-11.5	-12.3	-11.9	-10.8
-6.6	-5.9	-5.4	-5.0	-5.6	-6.2	-6.2	-6.4	-6.3	-6.4	-6.3	-6.2	-4.6	-2.1	-1.1	-.9	-.8	-.2	-.3	.1	-.3	-1.3	-1.2	-1.6	-1.8	-1.4	-2.1	-2.4	-2.5	-3.3	-4.5	-4.9	-4.7	-5.2	-6.4	-7.1
2.0	1.9	2.0	2.6	1.6	.5	-.6	-1.2	-1.1	-1.0	-.6	3.0	1.5	1.2	2.4	3.2	4.2	5.0	5.6	5.6	5.9	6.7	9.5	12.8	10.1	6.6	9.6	11.5	11.0	9.2	8.8	10.0	7.0	4.3	2.6	2.0
8.9	8.8	8.9	10.9	12.9	12.9	10.7	9.6	12.4	13.8	13.3	17.5	11.1	8.8	8.9	14.6	21.6	30.6	34.8	35.3	34.7	37.1	41.0	44.2	35.1	34.6	39.5	40.9	41.7	41.4	41.7	40.2	37.5	34.0	20.2	9.6
19.1	18.4	18.6	22.0	22.3	22.2	23.8	27.2	30.1	30.6	25.7	23.0	23.7	25.8	28.9	33.0	35.8	38.6	40.5	42.3	43.6	45.0	45.8	45.9	45.8	45.3	44.5	43.0	41.7	41.5	39.9	38.2	36.0	32.4	23.1	19.5

Figure 27. ATOVS SD O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS8 (Surface)
NOAA15, using all observations



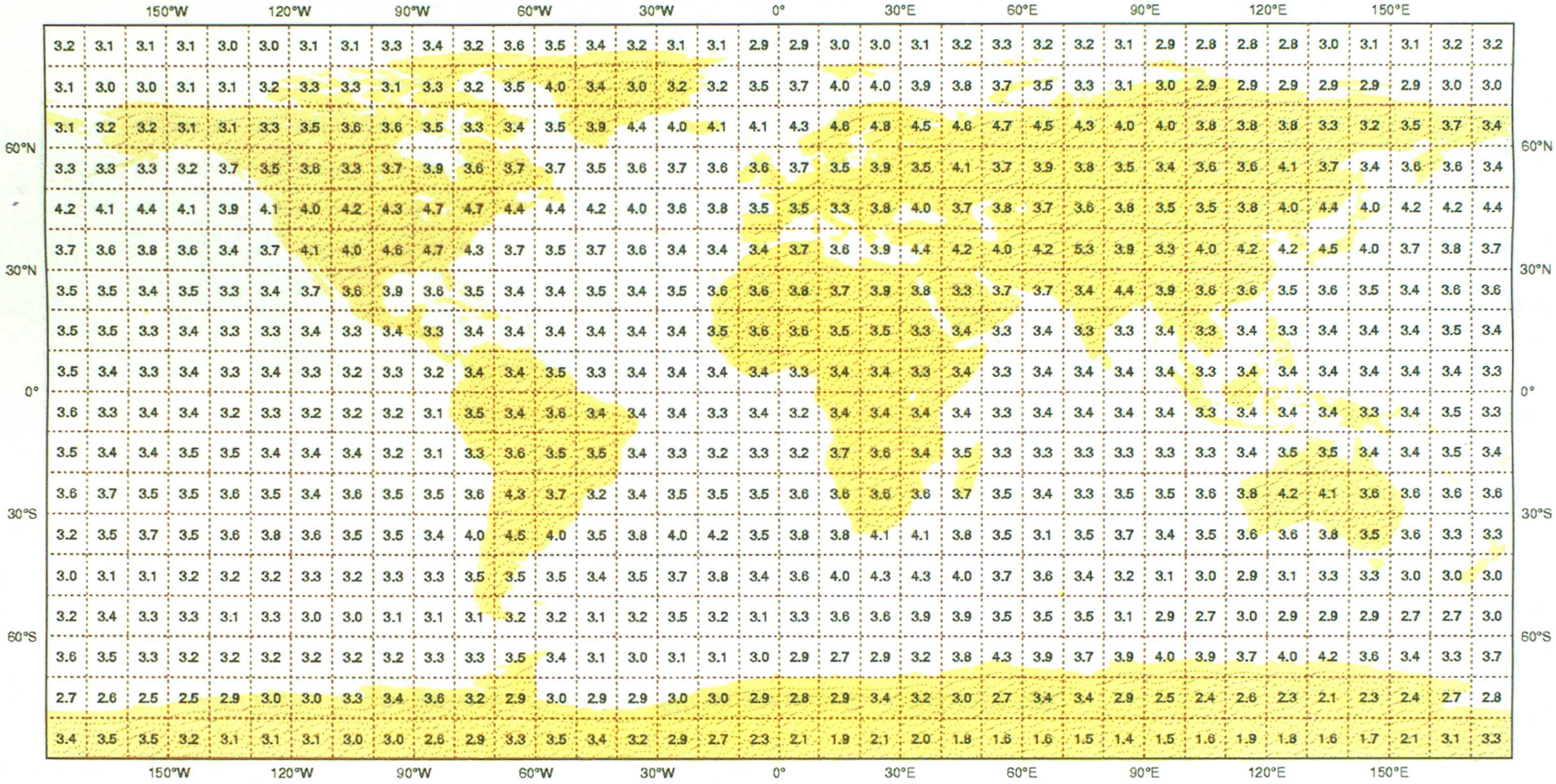
3.2	3.2	3.2	2.9	2.7	2.8	3.1	3.4	4.4	6.0	8.0	6.5	8.2	8.8	8.9	7.5	3.8	3.3	3.8	4.4	4.0	4.1	4.6	4.5	4.1	4.4	4.2	3.7	3.4	3.3	3.2	3.6	3.6	3.2	2.8	3.1
4.1	5.2	5.0	4.7	4.7	5.0	4.2	3.4	4.2	6.1	7.2	9.9	12.3	7.8	6.7	9.2	5.6	5.1	2.6	5.3	4.6	3.7	3.0	3.5	3.3	3.0	4.0	4.6	4.7	4.8	5.0	4.2	3.6	3.1	3.0	3.0
3.6	4.7	5.4	5.9	4.6	4.2	4.2	4.0	4.3	4.1	3.5	4.2	5.5	11.4	13.7	7.7	4.6	1.8	3.0	5.2	5.1	4.3	3.8	4.2	4.5	4.4	4.5	6.5	5.9	6.0	6.8	6.9	6.6	7.2	7.4	6.0
.9	1.8	3.3	1.4	5.8	4.3	3.9	3.7	3.9	3.0	3.3	3.0	1.8	2.1	1.5	1.4	1.3	2.1	3.1	3.8	4.2	4.1	4.3	4.4	4.2	3.7	3.6	3.8	4.8	5.1	5.8	6.6	4.5	3.8	3.1	1.0
2.7	2.5	2.5	2.1	1.7	3.8	4.8	5.3	5.4	5.4	5.8	5.0	4.8	3.8	2.0	1.8	1.6	3.2	4.6	5.6	4.9	5.5	5.1	5.0	4.8	4.6	5.0	5.7	5.3	4.9	5.8	7.3	3.3	3.1	2.6	2.6
2.3	2.4	2.2	1.8	1.4	2.6	6.6	6.3	6.1	6.5	4.8	2.1	1.7	1.5	1.6	1.5	1.5	4.1	4.3	2.5	4.2	7.3	7.5	6.3	6.4	12.9	8.2	5.2	5.7	4.5	4.5	3.4	3.0	2.5	2.6	2.4
1.6	1.4	1.1	1.0	.9	1.1	2.2	5.2	3.5	2.4	2.0	2.0	1.8	1.6	1.5	1.4	2.8	4.4	5.4	5.4	4.9	5.2	5.5	6.3	5.4	2.8	9.2	7.6	4.9	4.2	2.5	1.8	1.9	1.9	2.0	1.6
1.8	1.8	1.6	1.8	1.7	1.8	1.9	2.4	3.0	2.2	1.8	1.8	1.8	1.7	1.8	1.7	3.0	3.8	4.7	4.6	3.7	4.1	5.6	3.1	2.5	2.8	1.8	1.9	2.2	1.9	2.1	2.0	1.9	1.8	1.9	1.8
2.2	2.0	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.5	2.6	2.4	2.3	1.9	1.8	1.7	1.7	1.7	1.8	2.1	1.7	3.4	2.9	1.7	1.9	1.6	1.6	1.6	1.7	1.9	1.8	1.9	1.7	1.8	2.0	2.1
1.7	1.4	1.2	1.1	1.0	1.0	.9	.8	.8	1.3	3.5	2.3	2.7	3.0	2.1	.9	.9	1.0	1.1	1.8	2.4	3.7	1.4	1.6	1.8	1.7	1.8	1.9	1.9	2.1	2.4	2.8	2.5	1.8	2.1	2.0
1.9	1.9	1.7	1.4	1.4	1.2	1.0	.8	.7	.6	4.4	6.4	2.8	4.0	1.5	.9	.9	.9	1.0	4.0	4.4	4.0	3.1	1.3	1.3	1.6	2.0	1.7	1.3	1.4	2.4	2.5	2.5	1.5	1.6	1.8
1.9	2.1	2.1	2.2	2.0	1.7	1.5	1.2	1.0	.8	1.7	8.3	4.3	2.4	2.0	1.9	1.5	1.1	.7	3.9	5.9	3.7	2.7	1.3	1.2	1.0	1.4	1.4	1.4	4.1	6.1	4.8	3.9	2.5	1.7	1.7
1.4	1.6	1.8	1.8	1.9	1.9	2.0	2.0	1.8	1.5	3.3	5.6	3.6	1.9	2.0	2.0	2.0	2.0	2.0	1.9	3.8	2.1	2.0	1.6	1.5	1.8	1.7	1.7	2.0	2.9	2.9	2.8	3.5	2.3	1.7	2.3
1.7	1.2	1.0	1.1	1.3	1.5	1.5	1.4	1.4	1.4	3.7	3.3	2.3	2.7	2.7	2.8	2.9	2.9	2.4	3.5	4.0	3.4	3.2	3.5	3.9	3.1	2.2	2.0	2.0	1.6	1.1	1.4	1.9	2.1	2.5	2.4
1.9	2.2	2.6	2.9	2.3	1.7	1.3	1.2	1.0	.9	1.7	1.8	1.9	1.3	1.7	2.1	1.9	1.9	2.4	2.7	2.4	1.9	1.7	1.9	1.6	1.7	1.6	1.6	1.3	1.4	1.9	1.9	2.4	2.4	2.0	1.3
3.9	3.4	3.1	3.3	3.0	3.0	2.4	1.5	1.8	2.2	2.8	6.3	3.1	2.1	2.9	3.5	3.9	3.8	3.5	3.5	3.8	5.4	9.5	12.7	10.8	6.6	11.0	12.9	12.2	10.6	11.8	13.4	10.3	7.3	4.1	4.4
4.7	5.3	7.4	9.4	11.1	10.4	9.1	9.5	10.3	11.9	10.1	7.7	7.3	7.4	6.6	10.5	11.7	10.9	10.7	11.4	13.1	10.8	9.2	7.6	9.6	9.4	8.4	7.2	7.1	7.5	6.7	6.0	6.6	7.1	10.7	4.7
9.8	9.4	9.7	8.7	8.0	7.8	8.3	8.3	8.3	7.0	7.6	9.1	10.5	10.2	9.6	8.1	7.9	7.4	6.8	6.3	6.3	5.7	4.7	4.3	4.7	4.7	5.0	5.5	6.4	7.6	7.0	6.1	5.7	7.1	10.5	10.6

Figure 28. ATOVS MEAN O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS15 (700 hPa)
NOAA15, using all observations



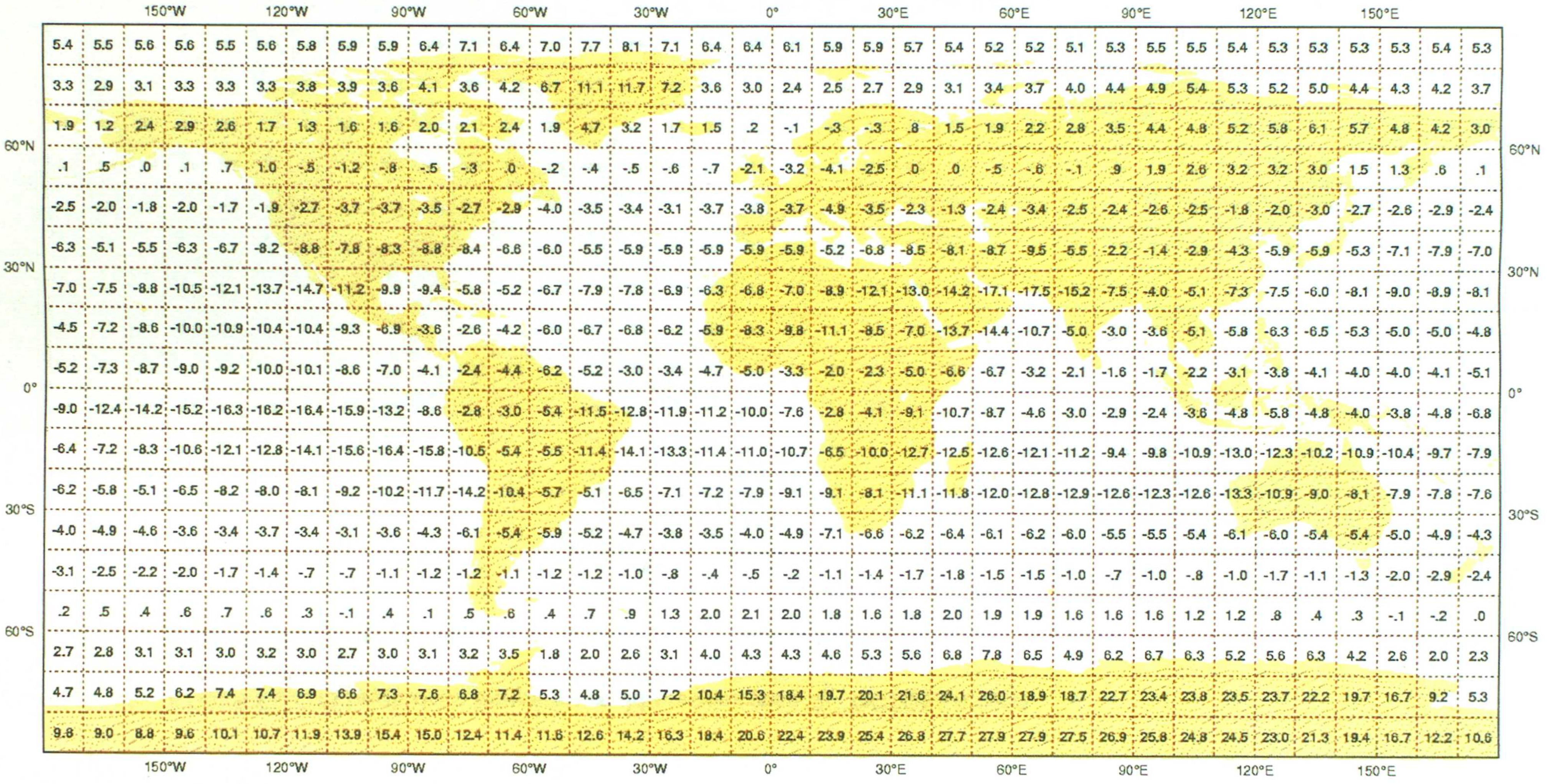
11.5	11.6	11.9	12.0	12.2	12.2	12.3	12.2	12.2	12.6	13.2	12.7	13.0	13.5	13.8	13.4	12.9	12.9	12.8	12.7	12.7	12.6	12.4	12.4	12.4	12.2	12.1	12.2	12.2	12.1	12.0	11.6	11.4	11.3	11.3	11.3
8.9	9.0	9.4	9.6	9.7	9.6	9.8	9.9	9.6	9.8	9.3	9.6	11.2	13.9	14.4	11.9	9.4	8.1	7.1	7.1	7.5	7.9	8.2	9.0	9.6	10.0	10.6	11.2	11.6	11.5	11.4	10.7	10.3	9.9	9.5	9.1
6.6	6.5	7.3	7.6	7.0	6.5	6.3	6.5	6.3	5.8	5.9	6.3	6.5	9.6	7.4	5.7	4.2	2.9	2.4	3.0	3.7	4.5	4.9	5.3	6.0	6.9	7.9	9.5	10.3	10.6	10.9	11.2	10.8	9.6	8.5	7.6
3.5	3.8	3.5	2.7	2.8	3.1	2.4	2.4	2.2	2.2	2.5	2.9	3.3	3.4	2.7	1.8	.4	-.5	-1.0	-.7	.8	2.7	2.5	2.5	2.5	2.9	3.8	5.0	6.2	7.4	7.6	7.5	5.4	4.5	3.4	3.3
-1.9	-1.0	-1.0	-1.4	-1.8	-2.0	-1.2	-1.7	-1.5	-.8	-.8	-1.8	-2.5	-1.9	-2.5	-2.5	-2.6	-2.7	-2.2	-1.8	-.2	.5	.0	-.6	-.2	1.0	1.6	2.7	3.1	2.7	2.4	1.2	.0	-1.2	-2.0	-1.6
-6.9	-6.4	-6.4	-6.1	-5.7	-5.6	-5.2	-5.1	-5.6	-5.2	-7.1	-7.4	-7.8	-7.0	-6.8	-5.9	-5.3	-5.0	-5.1	-5.1	-4.3	-4.1	-4.6	-4.9	-4.1	-1.2	.8	.7	-1.8	-2.8	-4.2	-6.0	-7.0	-8.1	-8.3	-7.1
-8.6	-8.5	-8.2	-8.1	-8.1	-8.5	-9.3	-9.0	-9.4	-9.9	-10.3	-9.8	-9.5	-9.0	-8.7	-8.1	-7.9	-8.1	-8.3	-7.8	-7.8	-9.5	-9.0	-10.3	-10.0	-9.8	-8.2	-8.1	-8.1	-8.5	-9.6	-10.1	-10.3	-10.3	-9.8	-8.9
-9.8	-10.1	-10.0	-9.9	-9.9	-10.0	-10.4	-10.6	-10.1	-10.5	-10.7	-10.5	-10.0	-10.0	-9.6	-9.6	-10.0	-10.1	-10.4	-10.1	-9.9	-10.3	-9.9	-10.7	-10.6	-10.6	-10.8	-10.6	-10.4	-10.6	-10.9	-10.9	-10.9	-10.7	-10.3	-10.4
-10.4	-10.7	-10.5	-10.4	-10.3	-9.9	-10.0	-9.9	-9.9	-10.1	-9.8	-10.3	-10.3	-10.3	-9.6	-9.7	-9.9	-9.5	-9.7	-9.2	-9.6	-9.8	-9.2	-10.1	-9.9	-10.2	-10.5	-10.2	-10.6	-10.4	-10.8	-10.9	-10.8	-10.8	-10.7	-11.1
-10.5	-10.9	-10.8	-10.6	-10.6	-9.9	-9.9	-9.9	-9.6	-9.7	-9.8	-10.4	-10.5	-10.7	-9.9	-9.7	-9.7	-9.3	-9.7	-9.4	-9.7	-9.8	-9.7	-10.1	-10.0	-10.1	-10.4	-10.2	-10.5	-10.5	-10.7	-10.6	-10.5	-10.6	-10.8	-11.3
-9.6	-9.9	-9.8	-9.7	-9.3	-8.8	-8.7	-8.5	-8.7	-9.0	-8.4	-9.7	-10.3	-10.0	-9.5	-8.9	-8.5	-8.3	-9.0	-9.7	-10.2	-9.3	-8.8	-9.2	-9.6	-9.6	-9.8	-9.7	-10.2	-10.6	-10.6	-10.5	-10.3	-9.9	-9.8	-10.1
-6.3	-6.8	-7.1	-7.0	-6.5	-6.1	-5.8	-5.4	-5.4	-5.3	-5.9	-6.8	-8.0	-8.0	-7.8	-7.1	-6.5	-6.2	-6.7	-7.6	-8.3	-8.0	-7.6	-6.6	-6.6	-6.3	-6.4	-6.2	-6.5	-7.1	-7.6	-7.7	-7.7	-7.0	-6.5	-6.3
-1.8	-1.7	-2.1	-2.2	-1.9	-2.3	-2.1	-1.6	-1.5	-1.0	-1.3	-2.5	-2.7	-3.1	-3.2	-2.9	-2.6	-2.2	-2.1	-3.1	-4.1	-4.4	-4.0	-3.1	-3.0	-2.3	-1.7	-1.4	-1.1	-1.5	-2.0	-2.7	-3.0	-3.1	-2.3	-1.7
.7	1.3	1.5	1.7	2.0	1.5	1.4	1.6	1.5	2.1	2.4	2.5	2.9	2.9	3.0	3.1	3.3	2.8	3.1	2.2	1.6	1.2	1.0	1.2	1.2	1.8	2.1	2.1	1.9	1.5	1.0	.6	.1	.4	.8	1.2
3.4	3.9	4.4	4.9	5.0	4.7	4.8	4.6	4.6	5.0	5.3	5.9	6.4	6.9	7.3	7.6	7.4	7.3	7.5	7.3	7.1	6.8	6.4	6.0	5.9	5.9	5.7	5.3	4.8	4.0	3.2	3.2	3.2	3.1	3.2	3.2
7.2	7.4	8.0	8.7	8.6	8.3	8.0	7.8	8.0	8.3	8.6	9.3	8.9	8.9	9.7	10.2	10.6	11.0	11.3	11.6	11.8	11.9	12.1	12.2	11.4	10.4	10.7	10.8	10.2	9.3	8.9	8.9	8.1	7.3	7.2	7.2
11.1	11.2	11.4	11.8	12.3	12.4	11.9	11.6	12.3	12.7	12.4	13.0	11.7	11.3	11.6	12.9	14.7	16.9	18.3	18.9	19.1	19.7	20.4	21.0	18.4	18.2	19.5	19.4	19.5	19.4	19.4	18.8	17.6	16.3	13.3	11.4
14.6	14.3	14.1	14.4	14.6	14.8	15.4	16.3	16.9	17.0	15.7	15.0	15.0	15.4	16.2	17.1	18.1	18.9	19.7	20.4	21.1	21.7	22.0	22.0	22.0	21.9	21.7	21.3	20.9	20.6	20.1	19.4	18.6	17.6	15.7	15.0

Figure 29. ATOVS SD O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS15 (700 hPa)
NOAA15, using all observations



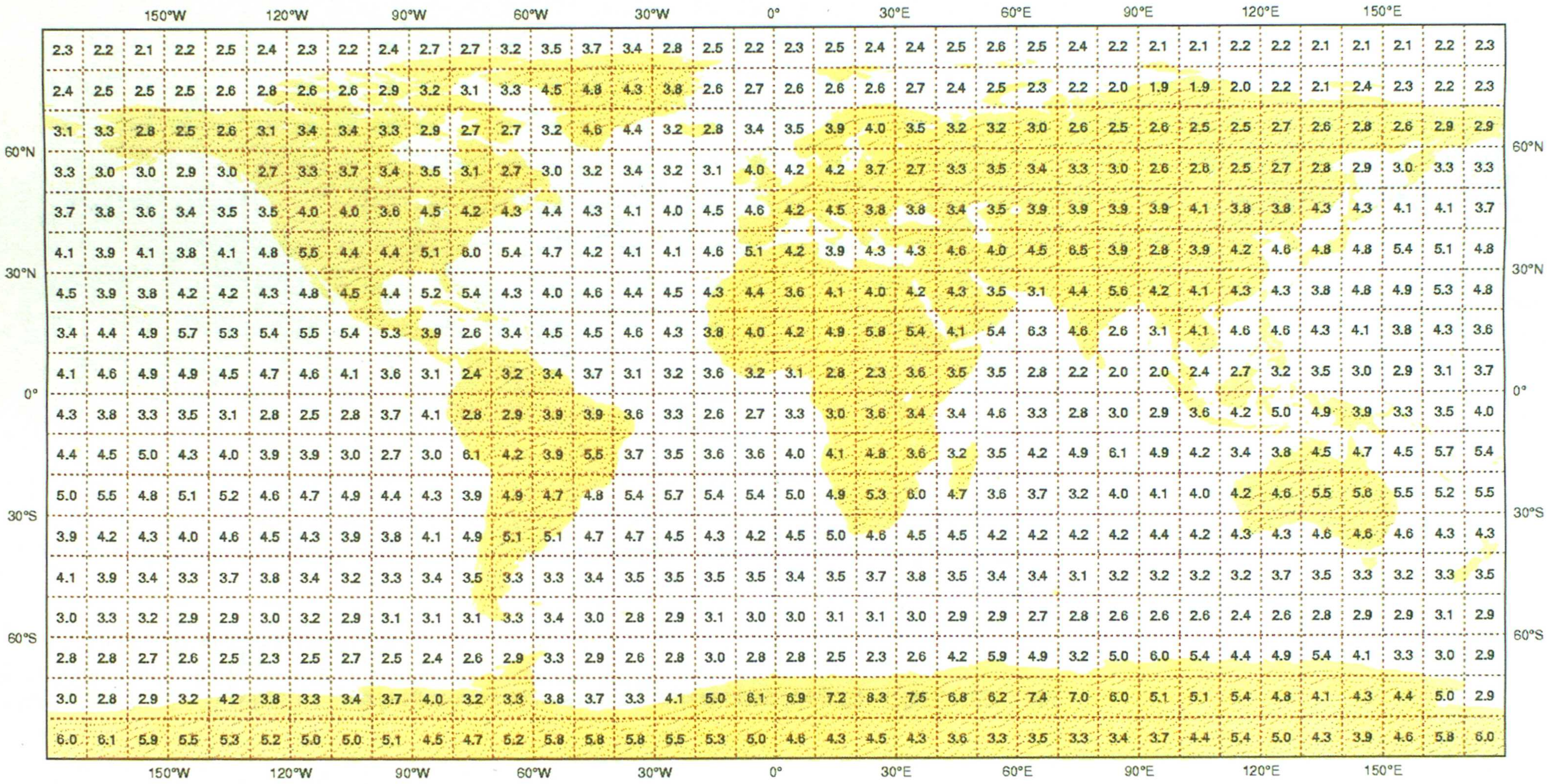
3.2	3.1	3.1	3.1	3.0	3.0	3.1	3.1	3.3	3.4	3.2	3.6	3.5	3.4	3.2	3.1	3.1	2.9	2.9	3.0	3.0	3.1	3.2	3.3	3.2	3.2	3.1	2.9	2.8	2.8	2.8	3.0	3.1	3.1	3.2	3.2
3.1	3.0	3.0	3.1	3.1	3.2	3.3	3.3	3.1	3.3	3.2	3.5	4.0	3.4	3.0	3.2	3.2	3.5	3.7	4.0	4.0	3.9	3.8	3.7	3.5	3.3	3.1	3.0	2.9	2.9	2.9	2.9	2.9	2.9	3.0	3.0
3.1	3.2	3.2	3.1	3.1	3.3	3.5	3.6	3.6	3.5	3.3	3.4	3.5	3.9	4.4	4.0	4.1	4.1	4.3	4.6	4.8	4.5	4.6	4.7	4.5	4.3	4.0	4.0	3.8	3.8	3.8	3.3	3.2	3.5	3.7	3.4
3.3	3.3	3.3	3.2	3.7	3.5	3.6	3.3	3.7	3.9	3.6	3.7	3.7	3.5	3.6	3.7	3.6	3.6	3.7	3.5	3.9	3.5	4.1	3.7	3.9	3.8	3.5	3.4	3.6	3.6	4.1	3.7	3.4	3.6	3.6	3.4
4.2	4.1	4.4	4.1	3.9	4.1	4.0	4.2	4.3	4.7	4.7	4.4	4.4	4.2	4.0	3.6	3.8	3.5	3.5	3.3	3.8	4.0	3.7	3.8	3.7	3.6	3.8	3.5	3.5	3.8	4.0	4.4	4.0	4.2	4.2	4.4
3.7	3.6	3.8	3.6	3.4	3.7	4.1	4.0	4.6	4.7	4.3	3.7	3.5	3.7	3.6	3.4	3.4	3.4	3.7	3.6	3.9	4.4	4.2	4.0	4.2	5.3	3.9	3.3	4.0	4.2	4.2	4.5	4.0	3.7	3.8	3.7
3.5	3.5	3.4	3.5	3.3	3.4	3.7	3.6	3.9	3.6	3.5	3.4	3.4	3.5	3.4	3.5	3.6	3.6	3.8	3.7	3.9	3.8	3.3	3.7	3.7	3.4	4.4	3.9	3.6	3.6	3.5	3.6	3.5	3.4	3.6	3.6
3.5	3.5	3.3	3.4	3.3	3.3	3.4	3.3	3.4	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.5	3.6	3.6	3.5	3.5	3.3	3.4	3.3	3.4	3.3	3.3	3.4	3.3	3.4	3.3	3.4	3.4	3.4	3.5	3.4
3.5	3.4	3.3	3.4	3.3	3.4	3.3	3.2	3.3	3.2	3.4	3.4	3.5	3.3	3.4	3.4	3.4	3.4	3.3	3.4	3.4	3.3	3.4	3.3	3.4	3.4	3.4	3.4	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.3
3.6	3.3	3.4	3.4	3.2	3.3	3.2	3.2	3.2	3.1	3.5	3.4	3.6	3.4	3.4	3.4	3.3	3.4	3.2	3.4	3.4	3.4	3.4	3.3	3.4	3.4	3.4	3.4	3.3	3.4	3.4	3.4	3.3	3.4	3.5	3.3
3.5	3.4	3.4	3.5	3.5	3.4	3.4	3.4	3.2	3.1	3.3	3.6	3.5	3.5	3.4	3.3	3.2	3.3	3.2	3.7	3.6	3.4	3.5	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.5	3.5	3.4	3.4	3.5	3.4
3.6	3.7	3.5	3.5	3.6	3.5	3.4	3.6	3.5	3.5	3.6	4.3	3.7	3.2	3.4	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.7	3.5	3.4	3.3	3.5	3.5	3.6	3.8	4.2	4.1	3.6	3.6	3.6	3.6
3.2	3.5	3.7	3.5	3.6	3.8	3.6	3.5	3.5	3.4	4.0	4.5	4.0	3.5	3.8	4.0	4.2	3.5	3.8	3.8	4.1	4.1	3.8	3.5	3.1	3.5	3.7	3.4	3.5	3.6	3.6	3.8	3.5	3.6	3.3	3.3
3.0	3.1	3.1	3.2	3.2	3.2	3.3	3.2	3.3	3.3	3.5	3.5	3.5	3.4	3.5	3.7	3.8	3.4	3.6	4.0	4.3	4.3	4.0	3.7	3.6	3.4	3.2	3.1	3.0	2.9	3.1	3.3	3.3	3.0	3.0	3.0
3.2	3.4	3.3	3.3	3.1	3.3	3.0	3.0	3.1	3.1	3.1	3.2	3.2	3.1	3.2	3.5	3.2	3.1	3.3	3.6	3.6	3.9	3.9	3.5	3.5	3.5	3.1	2.9	2.7	3.0	2.9	2.9	2.9	2.7	2.7	3.0
3.6	3.5	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.5	3.4	3.1	3.0	3.1	3.1	3.0	2.9	2.7	2.9	3.2	3.8	4.3	3.9	3.7	3.9	4.0	3.9	3.7	4.0	4.2	3.6	3.4	3.3	3.7
2.7	2.6	2.5	2.5	2.9	3.0	3.0	3.3	3.4	3.6	3.2	2.9	3.0	2.9	2.9	3.0	3.0	2.9	2.8	2.9	3.4	3.2	3.0	2.7	3.4	3.4	2.9	2.5	2.4	2.6	2.3	2.1	2.3	2.4	2.7	2.8
3.4	3.5	3.5	3.2	3.1	3.1	3.1	3.0	3.0	2.6	2.9	3.3	3.5	3.4	3.2	2.9	2.7	2.3	2.1	1.9	2.1	2.0	1.8	1.6	1.6	1.5	1.4	1.5	1.6	1.9	1.8	1.6	1.7	2.1	3.1	3.3

Figure 30. ATOVS MEAN O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS11 (500 - 700 hPa)
NOAA15, using all observations



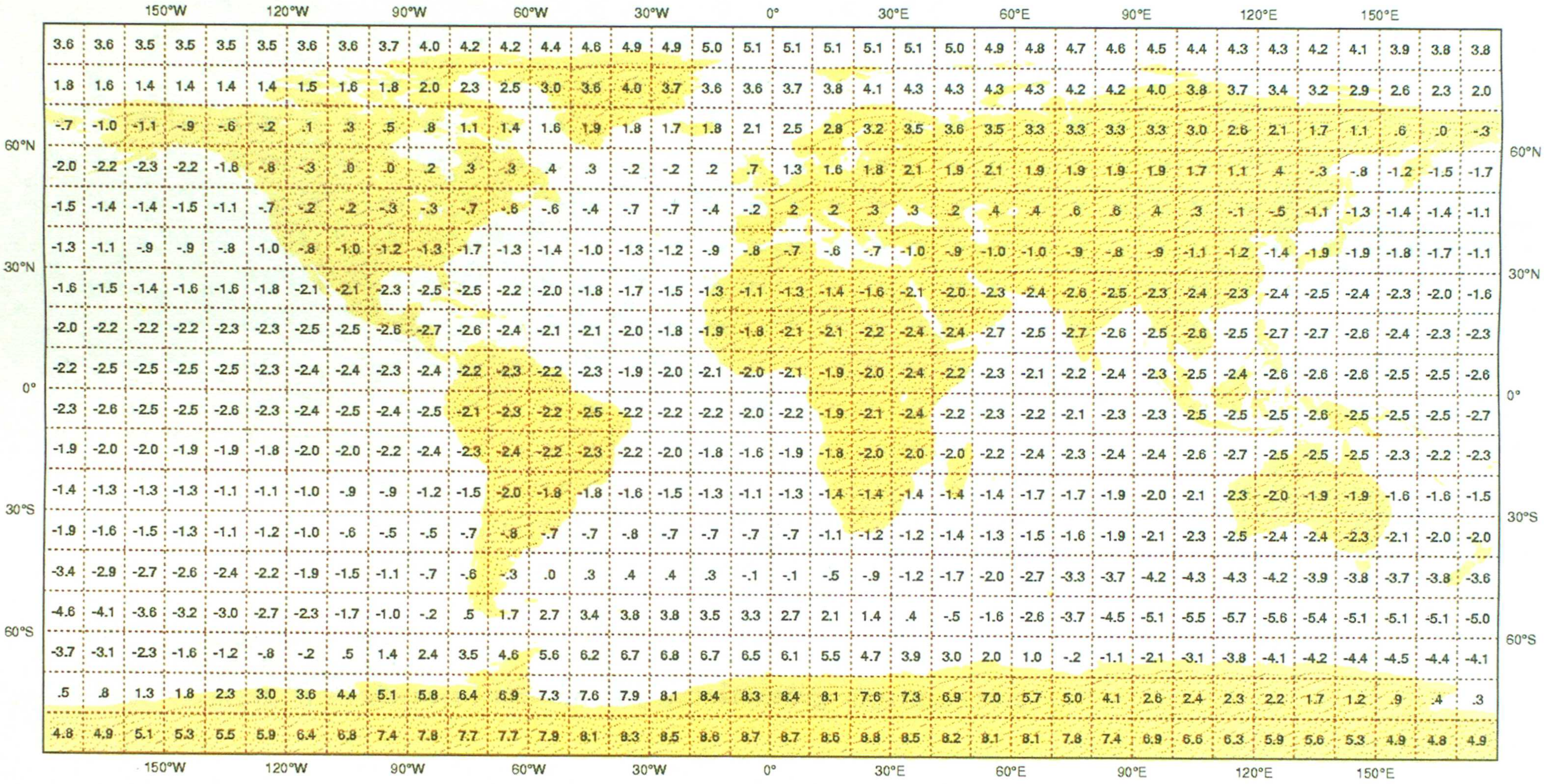
5.4	5.5	5.6	5.6	5.5	5.6	5.8	5.9	5.9	6.4	7.1	6.4	7.0	7.7	8.1	7.1	6.4	6.4	6.1	5.9	5.9	5.7	5.4	5.2	5.2	5.1	5.3	5.5	5.5	5.4	5.3	5.3	5.3	5.3	5.4	5.3
3.3	2.9	3.1	3.3	3.3	3.3	3.8	3.9	3.6	4.1	3.6	4.2	6.7	11.1	11.7	7.2	3.6	3.0	2.4	2.5	2.7	2.9	3.1	3.4	3.7	4.0	4.4	4.9	5.4	5.3	5.2	5.0	4.4	4.3	4.2	3.7
1.9	1.2	2.4	2.9	2.6	1.7	1.3	1.6	1.6	2.0	2.1	2.4	1.9	4.7	3.2	1.7	1.5	.2	-.1	-.3	-.3	.8	1.5	1.9	2.2	2.8	3.5	4.4	4.8	5.2	5.8	6.1	5.7	4.8	4.2	3.0
.1	.5	.0	.1	.7	1.0	-.5	-1.2	-.8	-.5	-.3	.0	-.2	-.4	-.5	-.6	-.7	-2.1	-3.2	-4.1	-2.5	.0	.0	-.5	-.6	-.1	.9	1.9	2.6	3.2	3.2	3.0	1.5	1.3	.6	.1
-2.5	-2.0	-1.8	-2.0	-1.7	-1.9	-2.7	-3.7	-3.7	-3.5	-2.7	-2.9	-4.0	-3.5	-3.4	-3.1	-3.7	-3.8	-3.7	-4.9	-3.5	-2.3	-1.3	-2.4	-3.4	-2.5	-2.4	-2.6	-2.5	-1.8	-2.0	-3.0	-2.7	-2.6	-2.9	-2.4
-6.3	-5.1	-5.5	-6.3	-6.7	-8.2	-8.8	-7.8	-8.3	-8.8	-8.4	-6.6	-6.0	-5.5	-5.9	-5.9	-5.9	-5.9	-5.9	-5.2	-6.8	-8.5	-8.1	-8.7	-9.5	-5.5	-2.2	-1.4	-2.9	-4.3	-5.9	-5.9	-5.3	-7.1	-7.9	-7.0
-7.0	-7.5	-8.8	-10.5	-12.1	-13.7	-14.7	-11.2	-9.9	-9.4	-5.8	-5.2	-6.7	-7.9	-7.8	-6.9	-6.3	-6.8	-7.0	-8.9	-12.1	-13.0	-14.2	-17.1	-17.5	-15.2	-7.5	-4.0	-5.1	-7.3	-7.5	-6.0	-8.1	-9.0	-8.9	-8.1
-4.5	-7.2	-8.6	-10.0	-10.9	-10.4	-10.4	-9.3	-6.9	-3.6	-2.6	-4.2	-6.0	-6.7	-6.8	-6.2	-5.9	-8.3	-9.8	-11.1	-8.5	-7.0	-13.7	-14.4	-10.7	-5.0	-3.0	-3.6	-5.1	-5.8	-6.3	-6.5	-5.3	-5.0	-5.0	-4.8
-5.2	-7.3	-8.7	-9.0	-9.2	-10.0	-10.1	-8.6	-7.0	-4.1	-2.4	-4.4	-6.2	-5.2	-3.0	-3.4	-4.7	-5.0	-3.3	-2.0	-2.3	-5.0	-6.6	-6.7	-3.2	-2.1	-1.6	-1.7	-2.2	-3.1	-3.8	-4.1	-4.0	-4.0	-4.1	-5.1
-9.0	-12.4	-14.2	-15.2	-16.3	-16.2	-16.4	-15.9	-13.2	-8.6	-2.8	-3.0	-5.4	-11.5	-12.8	-11.9	-11.2	-10.0	-7.6	-2.8	-4.1	-9.1	-10.7	-8.7	-4.6	-3.0	-2.9	-2.4	-3.6	-4.8	-5.8	-4.8	-4.0	-3.8	-4.8	-6.8
-6.4	-7.2	-8.3	-10.6	-12.1	-12.8	-14.1	-15.6	-16.4	-15.8	-10.5	-5.4	-5.5	-11.4	-14.1	-13.3	-11.4	-11.0	-10.7	-6.5	-10.0	-12.7	-12.5	-12.6	-12.1	-11.2	-9.4	-9.8	-10.9	-13.0	-12.3	-10.2	-10.9	-10.4	-9.7	-7.9
-6.2	-5.8	-5.1	-6.5	-8.2	-8.0	-8.1	-9.2	-10.2	-11.7	-14.2	-10.4	-5.7	-5.1	-6.5	-7.1	-7.2	-7.9	-9.1	-9.1	-8.1	-11.1	-11.8	-12.0	-12.8	-12.9	-12.6	-12.3	-12.6	-13.3	-10.9	-9.0	-8.1	-7.9	-7.8	-7.6
-4.0	-4.9	-4.6	-3.6	-3.4	-3.7	-3.4	-3.1	-3.6	-4.3	-6.1	-5.4	-5.9	-5.2	-4.7	-3.8	-3.5	-4.0	-4.9	-7.1	-6.6	-6.2	-6.4	-6.1	-6.2	-6.0	-5.5	-5.5	-5.4	-6.1	-6.0	-5.4	-5.4	-5.0	-4.9	-4.3
-3.1	-2.5	-2.2	-2.0	-1.7	-1.4	-.7	-.7	-1.1	-1.2	-1.2	-1.1	-1.2	-1.2	-1.0	-.8	-.4	-.5	-.2	-1.1	-1.4	-1.7	-1.8	-1.5	-1.5	-1.0	-.7	-1.0	-.8	-1.0	-1.7	-1.1	-1.3	-2.0	-2.9	-2.4
.2	.5	.4	.6	.7	.6	.3	-.1	.4	.1	.5	.6	.4	.7	.9	1.3	2.0	2.1	2.0	1.8	1.6	1.8	2.0	1.9	1.9	1.6	1.6	1.6	1.2	1.2	.8	.4	.3	-.1	-.2	.0
2.7	2.8	3.1	3.1	3.0	3.2	3.0	2.7	3.0	3.1	3.2	3.5	1.8	2.0	2.6	3.1	4.0	4.3	4.3	4.6	5.3	5.6	6.8	7.8	6.5	4.9	6.2	6.7	6.3	5.2	5.6	6.3	4.2	2.6	2.0	2.3
4.7	4.8	5.2	6.2	7.4	7.4	6.9	6.6	7.3	7.6	6.8	7.2	5.3	4.8	5.0	7.2	10.4	15.3	18.4	19.7	20.1	21.6	24.1	26.0	18.9	18.7	22.7	23.4	23.8	23.5	23.7	22.2	19.7	16.7	9.2	5.3
9.8	9.0	8.8	9.6	10.1	10.7	11.9	13.9	15.4	15.0	12.4	11.4	11.6	12.6	14.2	16.3	18.4	20.6	22.4	23.9	25.4	26.8	27.7	27.9	27.9	27.5	26.9	25.8	24.8	24.5	23.0	21.3	19.4	16.7	12.2	10.6

Figure 31. ATOVS SD O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS11 (500 - 700 hPa)
NOAA15, using all observations



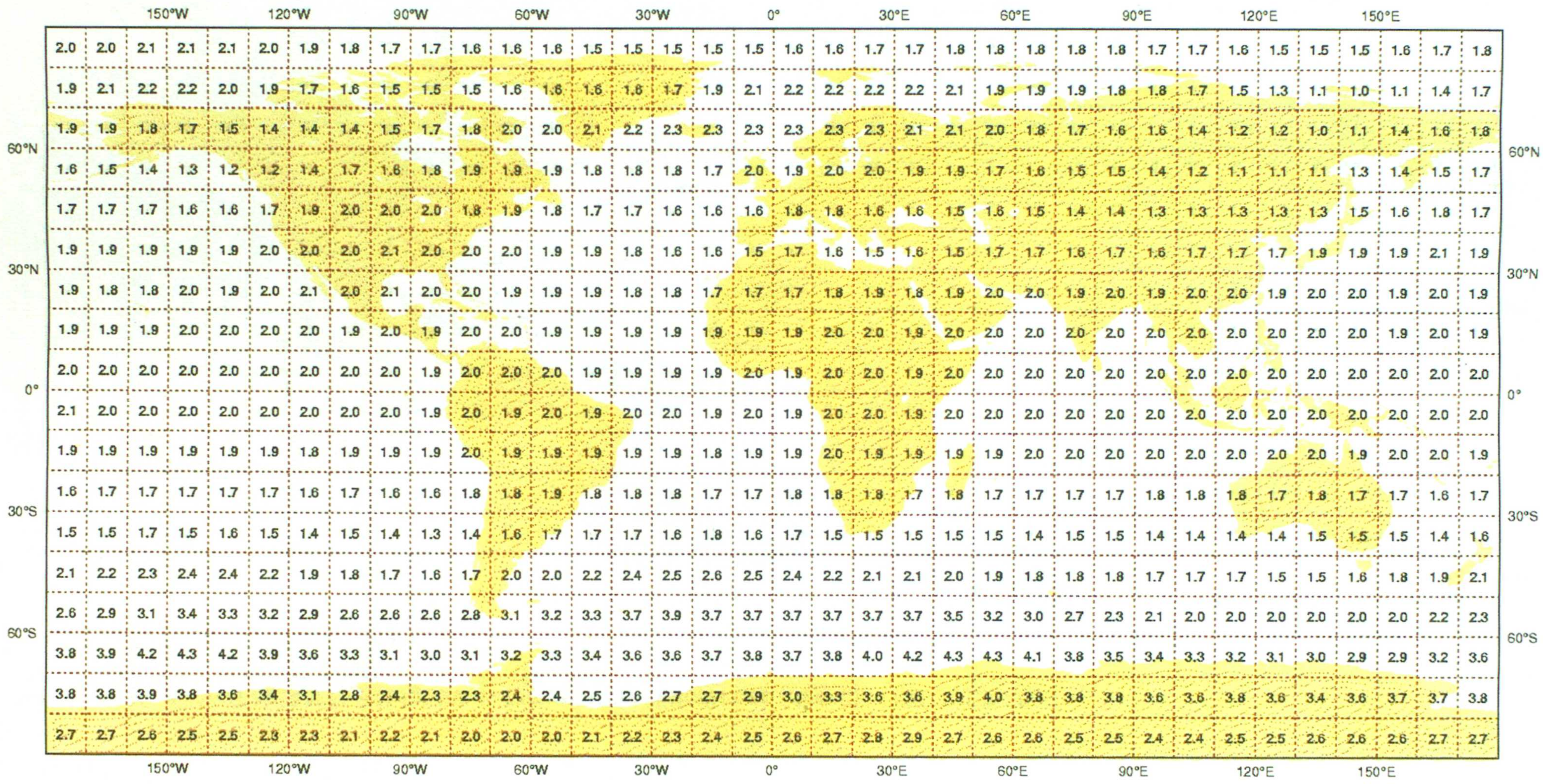
2.3	2.2	2.1	2.2	2.5	2.4	2.3	2.2	2.4	2.7	2.7	3.2	3.5	3.7	3.4	2.8	2.5	2.2	2.3	2.5	2.4	2.4	2.5	2.6	2.5	2.4	2.2	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.2	2.3
2.4	2.5	2.5	2.5	2.6	2.8	2.6	2.6	2.9	3.2	3.1	3.3	4.5	4.8	4.3	3.8	2.6	2.7	2.6	2.6	2.6	2.7	2.4	2.5	2.3	2.2	2.0	1.9	1.9	2.0	2.2	2.1	2.4	2.3	2.2	2.3
3.1	3.3	2.8	2.5	2.6	3.1	3.4	3.4	3.3	2.9	2.7	2.7	3.2	4.6	4.4	3.2	2.8	3.4	3.5	3.9	4.0	3.5	3.2	3.2	3.0	2.6	2.5	2.6	2.5	2.5	2.7	2.6	2.8	2.6	2.9	2.9
3.3	3.0	3.0	2.9	3.0	2.7	3.3	3.7	3.4	3.5	3.1	2.7	3.0	3.2	3.4	3.2	3.1	4.0	4.2	4.2	3.7	2.7	3.3	3.5	3.4	3.3	3.0	2.6	2.8	2.5	2.7	2.8	2.9	3.0	3.3	3.3
3.7	3.8	3.6	3.4	3.5	3.5	4.0	4.0	3.6	4.5	4.2	4.3	4.4	4.3	4.1	4.0	4.5	4.6	4.2	4.5	3.8	3.8	3.4	3.5	3.9	3.9	3.9	3.9	4.1	3.8	3.8	4.3	4.3	4.1	4.1	3.7
4.1	3.9	4.1	3.8	4.1	4.8	5.5	4.4	4.4	5.1	6.0	5.4	4.7	4.2	4.1	4.1	4.6	5.1	4.2	3.9	4.3	4.3	4.6	4.0	4.5	6.5	3.9	2.8	3.9	4.2	4.6	4.8	4.8	5.4	5.1	4.8
4.5	3.9	3.8	4.2	4.2	4.3	4.8	4.5	4.4	5.2	5.4	4.3	4.0	4.6	4.4	4.5	4.3	4.4	3.6	4.1	4.0	4.2	4.3	3.5	3.1	4.4	5.6	4.2	4.1	4.3	4.3	3.8	4.8	4.9	5.3	4.8
3.4	4.4	4.9	5.7	5.3	5.4	5.5	5.4	5.3	3.9	2.6	3.4	4.5	4.5	4.6	4.3	3.8	4.0	4.2	4.9	5.8	5.4	4.1	5.4	6.3	4.6	2.6	3.1	4.1	4.6	4.6	4.3	4.1	3.8	4.3	3.6
4.1	4.6	4.9	4.9	4.5	4.7	4.6	4.1	3.6	3.1	2.4	3.2	3.4	3.7	3.1	3.2	3.6	3.2	3.1	2.8	2.3	3.6	3.5	3.5	2.8	2.2	2.0	2.0	2.4	2.7	3.2	3.5	3.0	2.9	3.1	3.7
4.3	3.8	3.3	3.5	3.1	2.8	2.5	2.8	3.7	4.1	2.8	2.9	3.9	3.9	3.6	3.3	2.6	2.7	3.3	3.0	3.6	3.4	3.4	4.6	3.3	2.8	3.0	2.9	3.6	4.2	5.0	4.9	3.9	3.3	3.5	4.0
4.4	4.5	5.0	4.3	4.0	3.9	3.9	3.0	2.7	3.0	6.1	4.2	3.9	5.5	3.7	3.5	3.6	3.6	4.0	4.1	4.8	3.6	3.2	3.5	4.2	4.9	6.1	4.9	4.2	3.4	3.8	4.5	4.7	4.5	5.7	5.4
5.0	5.5	4.8	5.1	5.2	4.6	4.7	4.9	4.4	4.3	3.9	4.9	4.7	4.8	5.4	5.7	5.4	5.4	5.0	4.9	5.3	6.0	4.7	3.6	3.7	3.2	4.0	4.1	4.0	4.2	4.6	5.5	5.6	5.5	5.2	5.5
3.9	4.2	4.3	4.0	4.6	4.5	4.3	3.9	3.8	4.1	4.9	5.1	5.1	4.7	4.7	4.5	4.3	4.2	4.5	5.0	4.6	4.5	4.5	4.2	4.2	4.2	4.2	4.4	4.2	4.3	4.3	4.6	4.6	4.6	4.3	4.3
4.1	3.9	3.4	3.3	3.7	3.8	3.4	3.2	3.3	3.4	3.5	3.3	3.3	3.4	3.5	3.5	3.5	3.5	3.4	3.5	3.7	3.8	3.5	3.4	3.4	3.1	3.2	3.2	3.2	3.2	3.7	3.5	3.3	3.2	3.3	3.5
3.0	3.3	3.2	2.9	2.9	3.0	3.2	2.9	3.1	3.1	3.1	3.3	3.4	3.0	2.8	2.9	3.1	3.0	3.0	3.1	3.1	3.0	2.9	2.9	2.7	2.8	2.6	2.6	2.6	2.4	2.6	2.8	2.9	2.9	3.1	2.9
2.8	2.8	2.7	2.6	2.5	2.3	2.5	2.7	2.5	2.4	2.6	2.9	3.3	2.9	2.6	2.8	3.0	2.8	2.8	2.5	2.3	2.6	4.2	5.9	4.9	3.2	5.0	6.0	5.4	4.4	4.9	5.4	4.1	3.3	3.0	2.9
3.0	2.8	2.9	3.2	4.2	3.8	3.3	3.4	3.7	4.0	3.2	3.3	3.8	3.7	3.3	4.1	5.0	6.1	6.9	7.2	8.3	7.5	6.8	6.2	7.4	7.0	6.0	5.1	5.1	5.4	4.8	4.1	4.3	4.4	5.0	2.9
6.0	6.1	5.9	5.5	5.3	5.2	5.0	5.0	5.1	4.5	4.7	5.2	5.8	5.8	5.8	5.5	5.3	5.0	4.6	4.3	4.5	4.3	3.6	3.3	3.5	3.3	3.4	3.7	4.4	5.4	5.0	4.3	3.9	4.6	5.8	6.0

Figure 32. ATOVS MEAN O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS4 (400 hPa)
NOAA15, using all observations



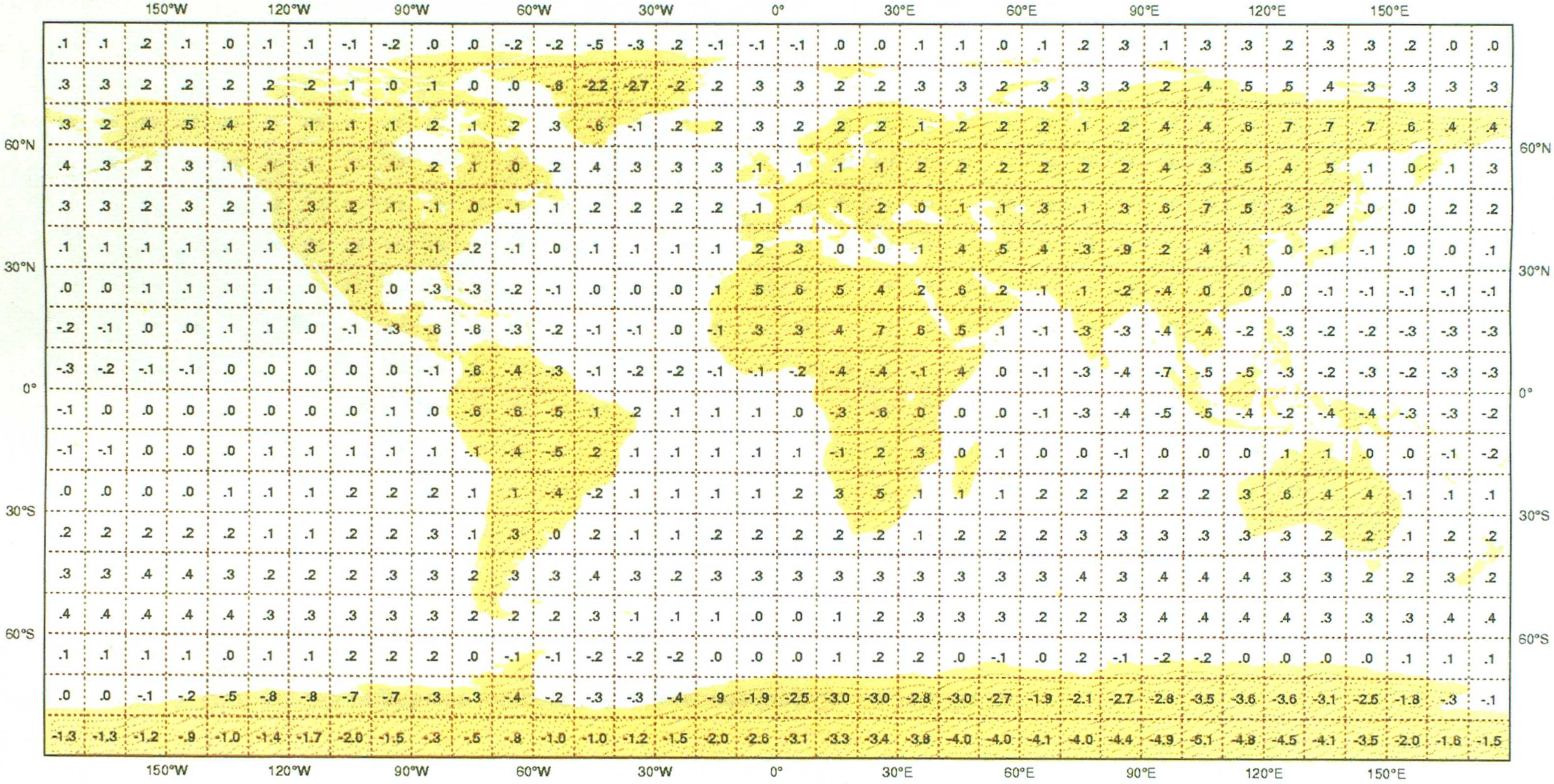
3.6	3.6	3.5	3.5	3.5	3.5	3.6	3.6	3.7	4.0	4.2	4.2	4.4	4.6	4.9	4.9	5.0	5.1	5.1	5.1	5.1	5.1	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.3	4.2	4.1	3.9	3.8	3.8
1.8	1.6	1.4	1.4	1.4	1.4	1.5	1.6	1.8	2.0	2.3	2.5	3.0	3.6	4.0	3.7	3.6	3.6	3.7	3.8	4.1	4.3	4.3	4.3	4.3	4.2	4.2	4.0	3.8	3.7	3.4	3.2	2.9	2.6	2.3	2.0
-.7	-1.0	-1.1	-.9	-.6	-.2	.1	.3	.5	.8	1.1	1.4	1.6	1.9	1.8	1.7	1.8	2.1	2.5	2.8	3.2	3.5	3.6	3.5	3.3	3.3	3.3	3.3	3.0	2.6	2.1	1.7	1.1	.6	.0	-.3
-2.0	-2.2	-2.3	-2.2	-1.8	-.8	-.3	.0	.0	.2	.3	.3	.4	.3	-.2	-.2	.2	.7	1.3	1.6	1.8	2.1	1.9	2.1	1.9	1.9	1.9	1.9	1.7	1.1	.4	-.3	-.8	-1.2	-1.5	-1.7
-1.5	-1.4	-1.4	-1.5	-1.1	-.7	-.2	-.2	-.3	-.3	-.7	-.6	-.6	-.4	-.7	-.7	-.4	-.2	.2	.2	.3	.3	.2	.4	.4	.6	.6	.4	.3	-.1	-.5	-1.1	-1.3	-1.4	-1.4	-1.1
-1.3	-1.1	-.9	-.9	-.8	-1.0	-.8	-1.0	-1.2	-1.3	-1.7	-1.3	-1.4	-1.0	-1.3	-1.2	-.9	-.8	-.7	-.6	-.7	-1.0	-.9	-1.0	-1.0	-.9	-.8	-.9	-1.1	-1.2	-1.4	-1.9	-1.9	-1.8	-1.7	-1.1
-1.6	-1.5	-1.4	-1.6	-1.6	-1.8	-2.1	-2.1	-2.3	-2.5	-2.5	-2.2	-2.0	-1.8	-1.7	-1.5	-1.3	-1.1	-1.3	-1.4	-1.6	-2.1	-2.0	-2.3	-2.4	-2.6	-2.5	-2.3	-2.4	-2.3	-2.4	-2.5	-2.4	-2.3	-2.0	-1.6
-2.0	-2.2	-2.2	-2.2	-2.3	-2.3	-2.5	-2.5	-2.6	-2.7	-2.6	-2.4	-2.1	-2.1	-2.0	-1.8	-1.9	-1.8	-2.1	-2.1	-2.2	-2.4	-2.4	-2.7	-2.5	-2.7	-2.6	-2.5	-2.6	-2.5	-2.7	-2.7	-2.6	-2.4	-2.3	-2.3
-2.2	-2.5	-2.5	-2.5	-2.5	-2.3	-2.4	-2.4	-2.3	-2.4	-2.2	-2.3	-2.2	-2.3	-1.9	-2.0	-2.1	-2.0	-2.1	-1.9	-2.0	-2.4	-2.2	-2.3	-2.1	-2.2	-2.4	-2.3	-2.5	-2.4	-2.6	-2.6	-2.6	-2.5	-2.5	-2.6
-2.3	-2.6	-2.5	-2.5	-2.6	-2.3	-2.4	-2.5	-2.4	-2.5	-2.1	-2.3	-2.2	-2.5	-2.2	-2.2	-2.2	-2.0	-2.2	-1.9	-2.1	-2.4	-2.2	-2.3	-2.2	-2.1	-2.3	-2.3	-2.5	-2.5	-2.5	-2.6	-2.5	-2.5	-2.5	-2.7
-1.9	-2.0	-2.0	-1.9	-1.9	-1.8	-2.0	-2.0	-2.2	-2.4	-2.3	-2.4	-2.2	-2.3	-2.2	-2.0	-1.8	-1.6	-1.9	-1.8	-2.0	-2.0	-2.0	-2.2	-2.4	-2.3	-2.4	-2.4	-2.6	-2.7	-2.5	-2.5	-2.5	-2.3	-2.2	-2.3
-1.4	-1.3	-1.3	-1.3	-1.1	-1.1	-1.0	-.9	-.9	-1.2	-1.5	-2.0	-1.8	-1.8	-1.6	-1.5	-1.3	-1.1	-1.3	-1.4	-1.4	-1.4	-1.4	-1.4	-1.7	-1.7	-1.9	-2.0	-2.1	-2.3	-2.0	-1.9	-1.9	-1.6	-1.6	-1.5
-1.9	-1.6	-1.5	-1.3	-1.1	-1.2	-1.0	-.6	-.5	-.5	-.7	-.8	-.7	-.7	-.8	-.7	-.7	-.7	-.7	-1.1	-1.2	-1.2	-1.4	-1.3	-1.5	-1.6	-1.9	-2.1	-2.3	-2.5	-2.4	-2.4	-2.3	-2.1	-2.0	-2.0
-3.4	-2.9	-2.7	-2.6	-2.4	-2.2	-1.9	-1.5	-1.1	-.7	-.6	-.3	.0	.3	.4	.4	.3	-.1	-.1	-.5	-.9	-1.2	-1.7	-2.0	-2.7	-3.3	-3.7	-4.2	-4.3	-4.3	-4.2	-3.9	-3.8	-3.7	-3.8	-3.6
-4.6	-4.1	-3.6	-3.2	-3.0	-2.7	-2.3	-1.7	-1.0	-.2	.5	1.7	2.7	3.4	3.8	3.8	3.5	3.3	2.7	2.1	1.4	.4	-.5	-1.6	-2.6	-3.7	-4.5	-5.1	-5.5	-5.7	-5.6	-5.4	-5.1	-5.1	-5.1	-5.0
-3.7	-3.1	-2.3	-1.6	-1.2	-.8	-.2	.5	1.4	2.4	3.5	4.6	5.6	6.2	6.7	6.8	6.7	6.5	6.1	5.5	4.7	3.9	3.0	2.0	1.0	-.2	-1.1	-2.1	-3.1	-3.8	-4.1	-4.2	-4.4	-4.5	-4.4	-4.1
.5	.8	1.3	1.8	2.3	3.0	3.6	4.4	5.1	5.8	6.4	6.9	7.3	7.6	7.9	8.1	8.4	8.3	8.4	8.1	7.6	7.3	6.9	7.0	5.7	5.0	4.1	2.6	2.4	2.3	2.2	1.7	1.2	.9	.4	.3
4.8	4.9	5.1	5.3	5.5	5.9	6.4	6.8	7.4	7.8	7.7	7.7	7.9	8.1	8.3	8.5	8.6	8.7	8.7	8.6	8.8	8.5	8.2	8.1	8.1	7.8	7.4	6.9	6.6	6.3	5.9	5.6	5.3	4.9	4.8	4.9

Figure 33. ATOVS SD O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS4 (400 hPa)
NOAA15, using all observations



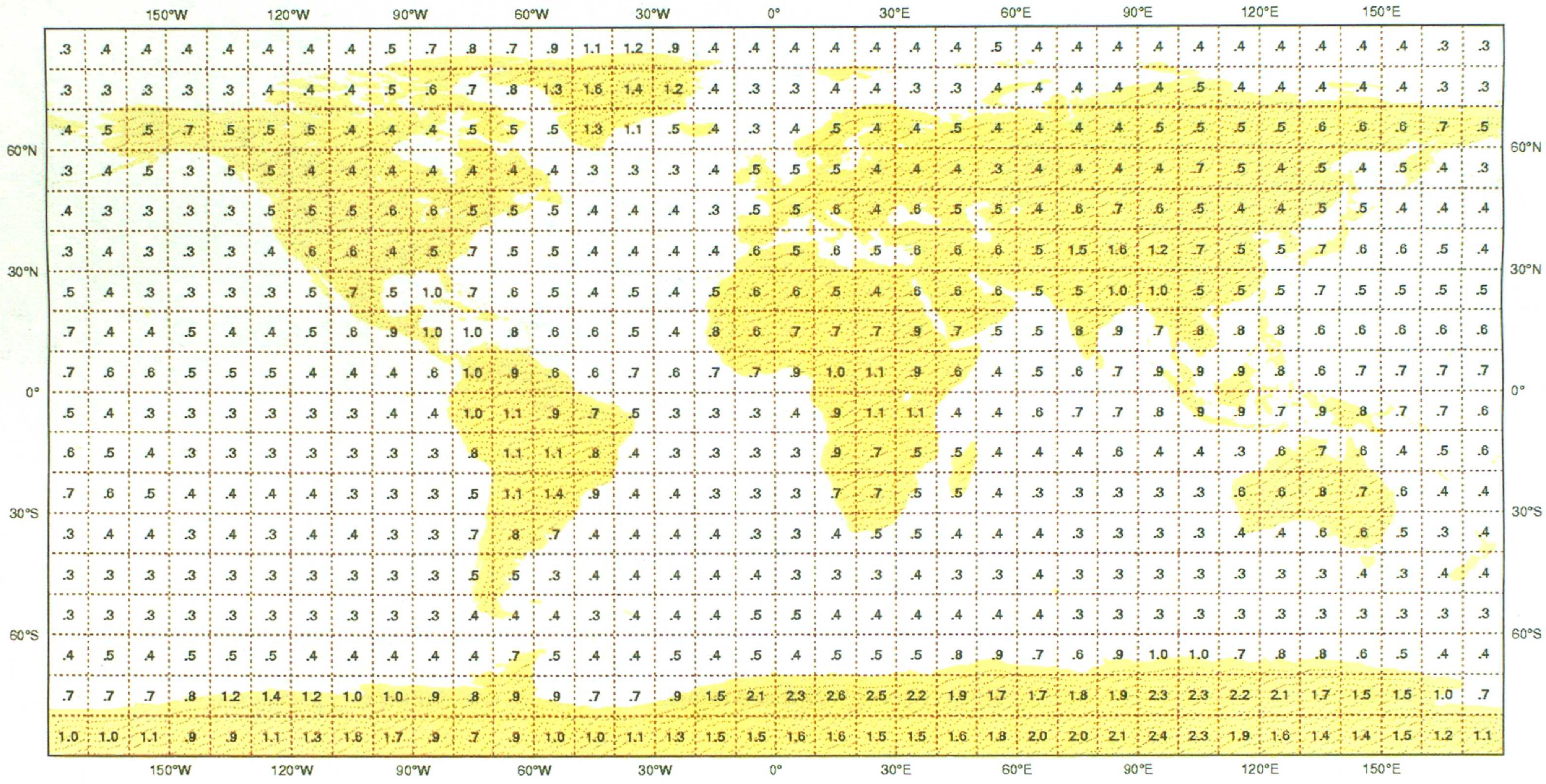
2.0	2.0	2.1	2.1	2.1	2.0	1.9	1.8	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.6	1.5	1.5	1.5	1.6	1.7	1.8
1.9	2.1	2.2	2.2	2.0	1.9	1.7	1.6	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7	1.9	2.1	2.2	2.2	2.2	2.2	2.1	1.9	1.9	1.9	1.8	1.8	1.7	1.5	1.3	1.1	1.0	1.1	1.4	1.7
1.9	1.9	1.8	1.7	1.5	1.4	1.4	1.4	1.5	1.7	1.8	2.0	2.0	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.1	2.1	2.0	1.8	1.7	1.6	1.6	1.4	1.2	1.2	1.0	1.1	1.4	1.6	1.8
1.6	1.5	1.4	1.3	1.2	1.2	1.4	1.7	1.6	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.7	2.0	1.9	2.0	2.0	1.9	1.9	1.7	1.6	1.5	1.5	1.4	1.2	1.1	1.1	1.1	1.3	1.4	1.5	1.7
1.7	1.7	1.7	1.6	1.6	1.7	1.9	2.0	2.0	2.0	1.8	1.9	1.8	1.7	1.7	1.6	1.6	1.6	1.8	1.8	1.6	1.6	1.5	1.6	1.5	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.5	1.6	1.8	1.7
1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.6	1.6	1.5	1.7	1.6	1.5	1.6	1.5	1.7	1.7	1.6	1.7	1.6	1.7	1.7	1.7	1.9	1.9	1.9	2.1	1.9
1.9	1.8	1.8	2.0	1.9	2.0	2.1	2.0	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.7	1.8	1.9	1.8	1.9	2.0	2.0	1.9	2.0	1.9	2.0	2.0	1.9	2.0	2.0	1.9	2.0	1.9
1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	2.0	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9
2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	2.0	1.9	2.0	2.0	1.9	2.0	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	1.9
1.6	1.7	1.7	1.7	1.7	1.7	1.6	1.7	1.6	1.6	1.8	1.8	1.9	1.8	1.8	1.8	1.7	1.7	1.8	1.8	1.8	1.7	1.8	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.7	1.8	1.7	1.7	1.6	1.7
1.5	1.5	1.7	1.5	1.6	1.5	1.4	1.5	1.4	1.3	1.4	1.6	1.7	1.7	1.7	1.6	1.8	1.6	1.7	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.5	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.4	1.6
2.1	2.2	2.3	2.4	2.4	2.2	1.9	1.8	1.7	1.6	1.7	2.0	2.0	2.2	2.4	2.5	2.6	2.5	2.4	2.2	2.1	2.1	2.0	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.5	1.5	1.6	1.8	1.9	2.1
2.6	2.9	3.1	3.4	3.3	3.2	2.9	2.6	2.6	2.6	2.8	3.1	3.2	3.3	3.7	3.9	3.7	3.7	3.7	3.7	3.7	3.7	3.5	3.2	3.0	2.7	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.3
3.8	3.9	4.2	4.3	4.2	3.9	3.6	3.3	3.1	3.0	3.1	3.2	3.3	3.4	3.6	3.6	3.7	3.8	3.7	3.8	4.0	4.2	4.3	4.3	4.1	3.8	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.9	3.2	3.6
3.8	3.8	3.9	3.8	3.6	3.4	3.1	2.8	2.4	2.3	2.3	2.4	2.4	2.5	2.6	2.7	2.7	2.9	3.0	3.3	3.6	3.6	3.9	4.0	3.8	3.8	3.8	3.6	3.6	3.8	3.6	3.4	3.6	3.7	3.7	3.8
2.7	2.7	2.6	2.5	2.5	2.3	2.3	2.1	2.2	2.1	2.0	2.0	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.7	2.6	2.6	2.5	2.5	2.4	2.4	2.5	2.5	2.6	2.6	2.6	2.7	2.7

Figure 34. ATOVS MEAN O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: AMSUA-5 (700 hPa)
NOAA15, using all observations



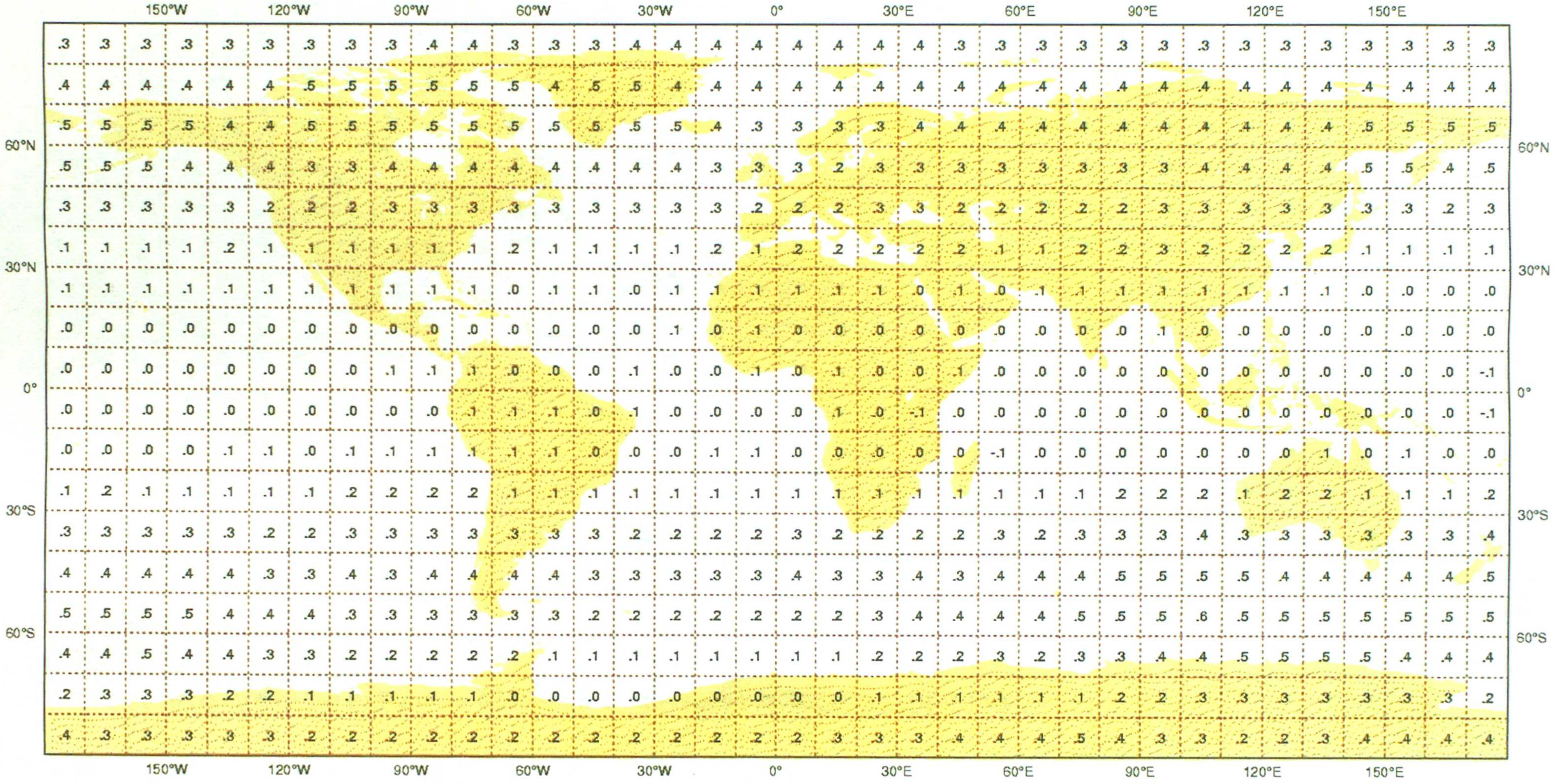
.1	.1	.2	.1	.0	.1	.1	-.1	-.2	.0	.0	-.2	-.2	-.5	-.3	.2	-.1	-.1	-.1	.0	.0	.1	.1	.0	.1	.2	.3	.1	.3	.3	.2	.3	.3	.2	.0	.0
.3	.3	.2	.2	.2	.2	.2	.1	.0	.1	.0	.0	-.8	-2.2	-2.7	-.2	.2	.3	.3	.2	.2	.3	.3	.2	.3	.3	.3	.2	.4	.5	.5	.4	.3	.3	.3	.3
.3	.2	.4	.5	.4	.2	.1	.1	.1	.2	.1	.2	.3	-.6	-.1	.2	.2	.3	.2	.2	.2	.1	.2	.2	.2	.1	.2	.4	.4	.6	.7	.7	.7	.6	.4	.4
.4	.3	.2	.3	.1	.1	.1	.1	.1	.2	.1	.0	.2	.4	.3	.3	.3	.1	.1	.1	.1	.2	.2	.2	.2	.2	.2	.4	.3	.5	.4	.5	.1	.0	.1	.3
.3	.3	.2	.3	.2	.1	.3	.2	.1	-.1	.0	-.1	.1	.2	.2	.2	.2	.1	.1	.1	.2	.0	.1	.1	.3	.1	.3	.6	.7	.5	.3	.2	.0	.0	.2	.2
.1	.1	.1	.1	.1	.1	.3	.2	.1	-.1	-.2	-.1	.0	.1	.1	.1	.1	.2	.3	.0	.0	.1	.4	.5	.4	-.3	-.9	.2	.4	.1	.0	-.1	-.1	.0	.0	.1
.0	.0	.1	.1	.1	.1	.0	.1	.0	-.3	-.3	-.2	-.1	.0	.0	.0	.1	.5	.6	.5	.4	.2	.6	.2	.1	.1	-.2	-.4	.0	.0	.0	-.1	-.1	-.1	-.1	-.1
-.2	-.1	.0	.0	.1	.1	.0	-.1	-.3	-.6	-.6	-.3	-.2	-.1	-.1	.0	-.1	.3	.3	.4	.7	.6	.5	.1	-.1	-.3	-.3	-.4	-.4	-.2	-.3	-.2	-.2	-.3	-.3	-.3
-.3	-.2	-.1	-.1	.0	.0	.0	.0	.0	-.1	-.6	-.4	-.3	-.1	-.2	-.2	-.1	-.1	-.2	-.4	-.4	-.1	.4	.0	-.1	-.3	-.4	-.7	-.5	-.5	-.3	-.2	-.3	-.2	-.3	-.3
-.1	.0	.0	.0	.0	.0	.0	.0	.1	.0	-.6	-.6	-.5	.1	.2	.1	.1	.1	.0	-.3	-.6	.0	.0	.0	-.1	-.3	-.4	-.5	-.5	-.4	-.2	-.4	-.4	-.3	-.3	-.2
-.1	-.1	.0	.0	.0	.1	.1	.1	.1	.1	-.1	-.4	-.5	.2	.1	.1	.1	.1	.1	-.1	.2	.3	.0	.1	.0	.0	-.1	.0	.0	.0	.1	.1	.0	.0	-.1	-.2
.0	.0	.0	.0	.1	.1	.1	.2	.2	.2	.1	.1	-.4	-.2	.1	.1	.1	.1	.2	.3	.5	.1	.1	.1	.2	.2	.2	.2	.2	.3	.6	.4	.4	.1	.1	.1
.2	.2	.2	.2	.2	.1	.1	.2	.2	.3	.1	.3	.0	.2	.1	.1	.2	.2	.2	.2	.2	.1	.2	.2	.2	.3	.3	.3	.3	.3	.3	.2	.2	.1	.2	.2
.3	.3	.4	.4	.3	.2	.2	.2	.3	.3	.2	.3	.3	.4	.3	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.4	.4	.4	.3	.3	.2	.2	.3	.2
.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.2	.2	.2	.3	.1	.1	.1	.0	.0	.1	.2	.3	.3	.3	.2	.2	.3	.4	.4	.4	.4	.3	.3	.3	.4	.4
.1	.1	.1	.1	.0	.1	.1	.2	.2	.2	.0	-.1	-.1	-.2	-.2	-.2	.0	.0	.0	.1	.2	.2	.0	-.1	.0	.2	-.1	-.2	-.2	.0	.0	.0	.0	.1	.1	.1
.0	.0	-.1	-.2	-.5	-.8	-.8	-.7	-.7	-.3	-.3	-.4	-.2	-.3	-.3	-.4	-.9	-1.9	-2.5	-3.0	-3.0	-2.8	-3.0	-2.7	-1.9	-2.1	-2.7	-2.8	-3.5	-3.6	-3.6	-3.1	-2.5	-1.8	-.3	-.1
-1.3	-1.3	-1.2	-.9	-1.0	-1.4	-1.7	-2.0	-1.5	-.3	-.5	-.8	-1.0	-1.0	-1.2	-1.5	-2.0	-2.6	-3.1	-3.3	-3.4	-3.8	-4.0	-4.0	-4.1	-4.0	-4.4	-4.9	-5.1	-4.8	-4.5	-4.1	-3.5	-2.0	-1.6	-1.5

Figure 35. ATOVS SD O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: AMSUA-5 (700 hPa)
NOAA15, using all observations



.3	.4	.4	.4	.4	.4	.4	.4	.5	.7	.8	.7	.9	1.1	1.2	.9	.4	.4	.4	.4	.4	.4	.4	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3
.3	.3	.3	.3	.3	.4	.4	.4	.5	.6	.7	.8	1.3	1.6	1.4	1.2	.4	.3	.3	.4	.4	.3	.3	.4	.4	.4	.4	.4	.5	.4	.4	.4	.4	.4	.3	.3
.4	.5	.5	.7	.5	.5	.5	.4	.4	.4	.5	.5	.5	1.3	1.1	.5	.4	.3	.4	.5	.4	.4	.5	.4	.4	.4	.4	.5	.5	.5	.5	.6	.6	.6	.7	.5
.3	.4	.5	.3	.5	.5	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.4	.5	.5	.5	.4	.4	.4	.3	.4	.4	.4	.4	.7	.5	.4	.5	.4	.5	.4	.3
.4	.3	.3	.3	.3	.5	.5	.5	.6	.6	.5	.5	.5	.4	.4	.4	.3	.5	.5	.6	.4	.6	.5	.5	.4	.6	.7	.6	.5	.4	.4	.5	.5	.4	.4	.4
.3	.4	.3	.3	.3	.4	.6	.6	.4	.5	.7	.5	.5	.4	.4	.4	.4	.6	.5	.6	.5	.6	.6	.6	.5	1.5	1.6	1.2	.7	.5	.5	.7	.6	.6	.5	.4
.5	.4	.3	.3	.3	.3	.5	.7	.5	1.0	.7	.6	.5	.4	.5	.4	.5	.6	.6	.5	.4	.6	.6	.6	.5	.5	1.0	1.0	.5	.5	.5	.7	.5	.5	.5	.5
.7	.4	.4	.5	.4	.4	.5	.6	.9	1.0	1.0	.8	.6	.6	.5	.4	.8	.6	.7	.7	.7	.9	.7	.5	.5	.8	.9	.7	.8	.8	.8	.6	.6	.6	.6	.6
.7	.6	.6	.5	.5	.5	.4	.4	.4	.6	1.0	.9	.6	.6	.7	.6	.7	.7	.9	1.0	1.1	.9	.6	.4	.5	.6	.7	.9	.9	.9	.8	.6	.7	.7	.7	.7
.5	.4	.3	.3	.3	.3	.3	.3	.4	.4	1.0	1.1	.9	.7	.5	.3	.3	.3	.4	.9	1.1	1.1	.4	.4	.6	.7	.7	.8	.9	.9	.7	.9	.8	.7	.7	.6
.6	.5	.4	.3	.3	.3	.3	.3	.3	.3	.8	1.1	1.1	.8	.4	.3	.3	.3	.3	.9	.7	.5	.5	.4	.4	.4	.6	.4	.4	.3	.6	.7	.6	.4	.5	.6
.7	.6	.5	.4	.4	.4	.4	.3	.3	.3	.5	1.1	1.4	.9	.4	.4	.3	.3	.3	.7	.7	.5	.5	.4	.3	.3	.3	.3	.3	.6	.6	.8	.7	.6	.4	.4
.3	.4	.4	.3	.4	.3	.4	.4	.3	.3	.7	.8	.7	.4	.4	.4	.4	.3	.3	.4	.5	.5	.4	.4	.4	.3	.3	.3	.3	.4	.4	.6	.6	.5	.3	.4
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.5	.5	.3	.4	.4	.4	.4	.4	.3	.3	.3	.4	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.4	.3	.4	.4
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.3	.4	.4	.4	.5	.5	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.4	.5	.4	.5	.5	.5	.4	.4	.4	.4	.4	.7	.5	.4	.4	.5	.4	.5	.4	.5	.5	.5	.8	.9	.7	.6	.9	1.0	1.0	.7	.8	.8	.6	.5	.4	.4
.7	.7	.7	.8	1.2	1.4	1.2	1.0	1.0	.9	.8	.9	.9	.7	.7	.9	1.5	2.1	2.3	2.6	2.5	2.2	1.9	1.7	1.7	1.8	1.9	2.3	2.3	2.2	2.1	1.7	1.5	1.5	1.0	.7
1.0	1.0	1.1	.9	.9	1.1	1.3	1.6	1.7	.9	.7	.9	1.0	1.0	1.1	1.3	1.5	1.5	1.6	1.6	1.5	1.5	1.6	1.8	2.0	2.0	2.1	2.4	2.3	1.9	1.6	1.4	1.4	1.5	1.2	1.1

Figure 36. ATOVS MEAN O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: AMSUA-7 (300 hPa)
NOAA15, using all observations



.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.4	.5	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
.5	.5	.5	.5	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5
.5	.5	.5	.4	.4	.4	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.2	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.5	.5	.4	.5
.3	.3	.3	.3	.3	.2	.2	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.2	.2	.3	.3	.2	.2	.2	.2	.2	.3	.3	.3	.3	.3	.3	.3	.2	.3
.1	.1	.1	.1	.2	.1	.1	.1	.1	.1	.1	.2	.1	.1	.1	.1	.2	.1	.2	.2	.2	.2	.2	.1	.1	.2	.2	.3	.2	.2	.2	.2	.1	.1	.1	.1
.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.0	.1	.1	.0	.1	.1	.1	.1	.1	.1	.0	.1	.0	.1	.1	.1	.1	.1	.1	.1	.1	.0	.0	.0	.0
.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0
.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.0	.0	.0	.1	.0	.0	.1	.0	.1	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	-.1
.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.0	.1	.0	.0	.0	.0	.1	.0	-.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	-.1
.0	.0	.0	.0	.1	.1	.0	.1	.1	.1	.1	.1	.1	.0	.0	.0	.1	.1	.0	.0	.0	.0	.0	-.1	.0	.0	.0	.0	.0	.0	.0	.1	.0	.1	.0	.0
.1	.2	.1	.1	.1	.1	.1	.2	.2	.2	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.2	.1	.2	.2	.1	.1	.1	.2
.3	.3	.3	.3	.3	.2	.2	.3	.3	.3	.3	.3	.3	.3	.2	.2	.2	.2	.3	.2	.2	.2	.2	.3	.2	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.4
.4	.4	.4	.4	.4	.3	.3	.4	.3	.4	.4	.4	.4	.3	.3	.3	.3	.3	.4	.3	.3	.4	.3	.4	.4	.4	.5	.5	.5	.5	.4	.4	.4	.4	.4	.5
.5	.5	.5	.5	.4	.4	.4	.3	.3	.3	.3	.3	.3	.2	.2	.2	.2	.2	.2	.2	.3	.4	.4	.4	.4	.5	.5	.5	.6	.5	.5	.5	.5	.5	.5	.5
.4	.4	.5	.4	.4	.3	.3	.2	.2	.2	.2	.2	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.2	.3	.2	.3	.3	.4	.4	.5	.5	.5	.5	.4	.4	.4
.2	.3	.3	.3	.2	.2	.1	.1	.1	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1	.1	.1	.2	.2	.3	.3	.3	.3	.3	.3	.3	.2
.4	.3	.3	.3	.3	.3	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.3	.3	.3	.4	.4	.4	.5	.4	.3	.3	.2	.2	.3	.4	.4	.4	.4

Figure 37. ATOVS SD O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: AMSUA-7 (300 hPa)
NOAA15, using all observations

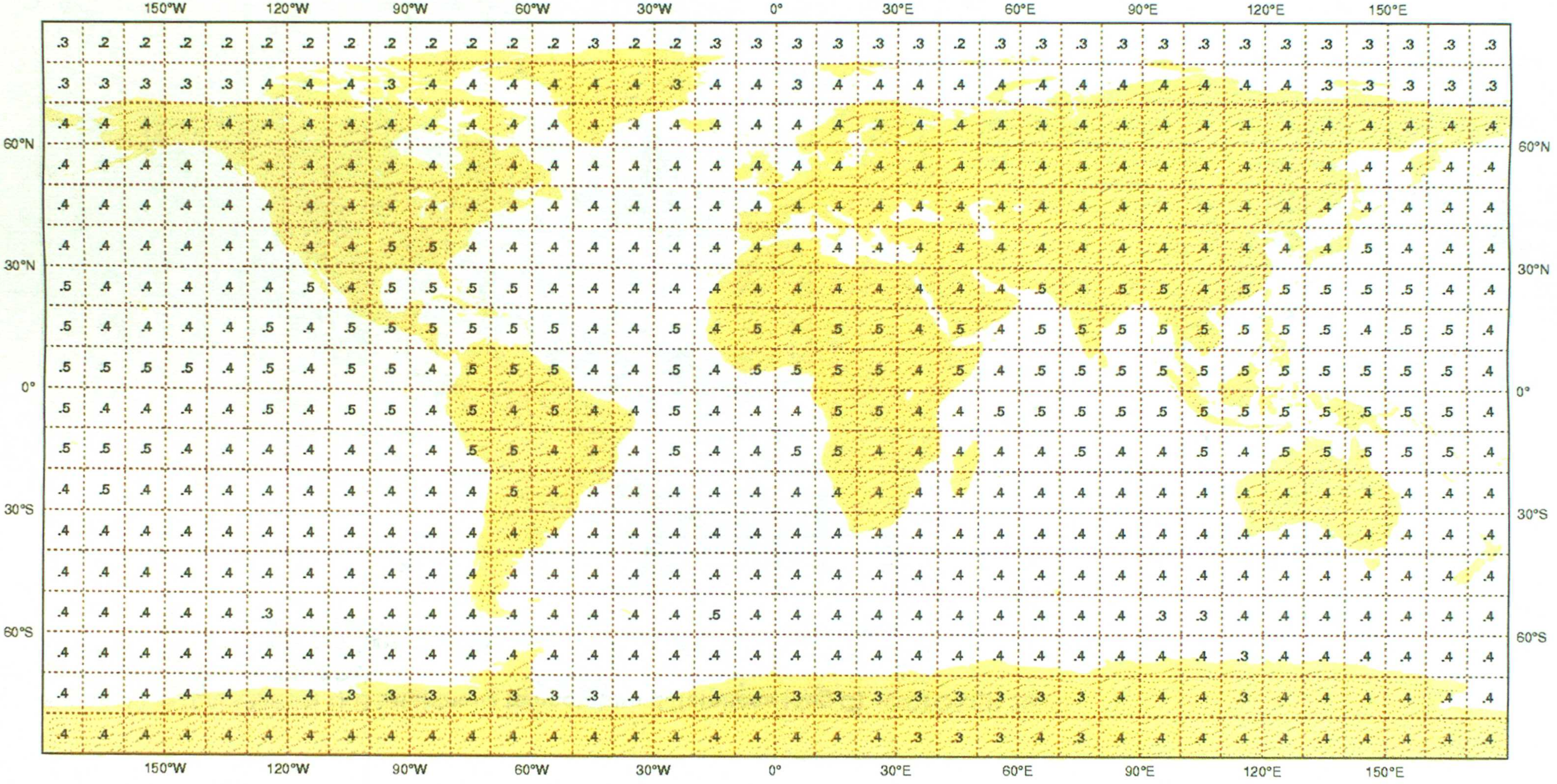
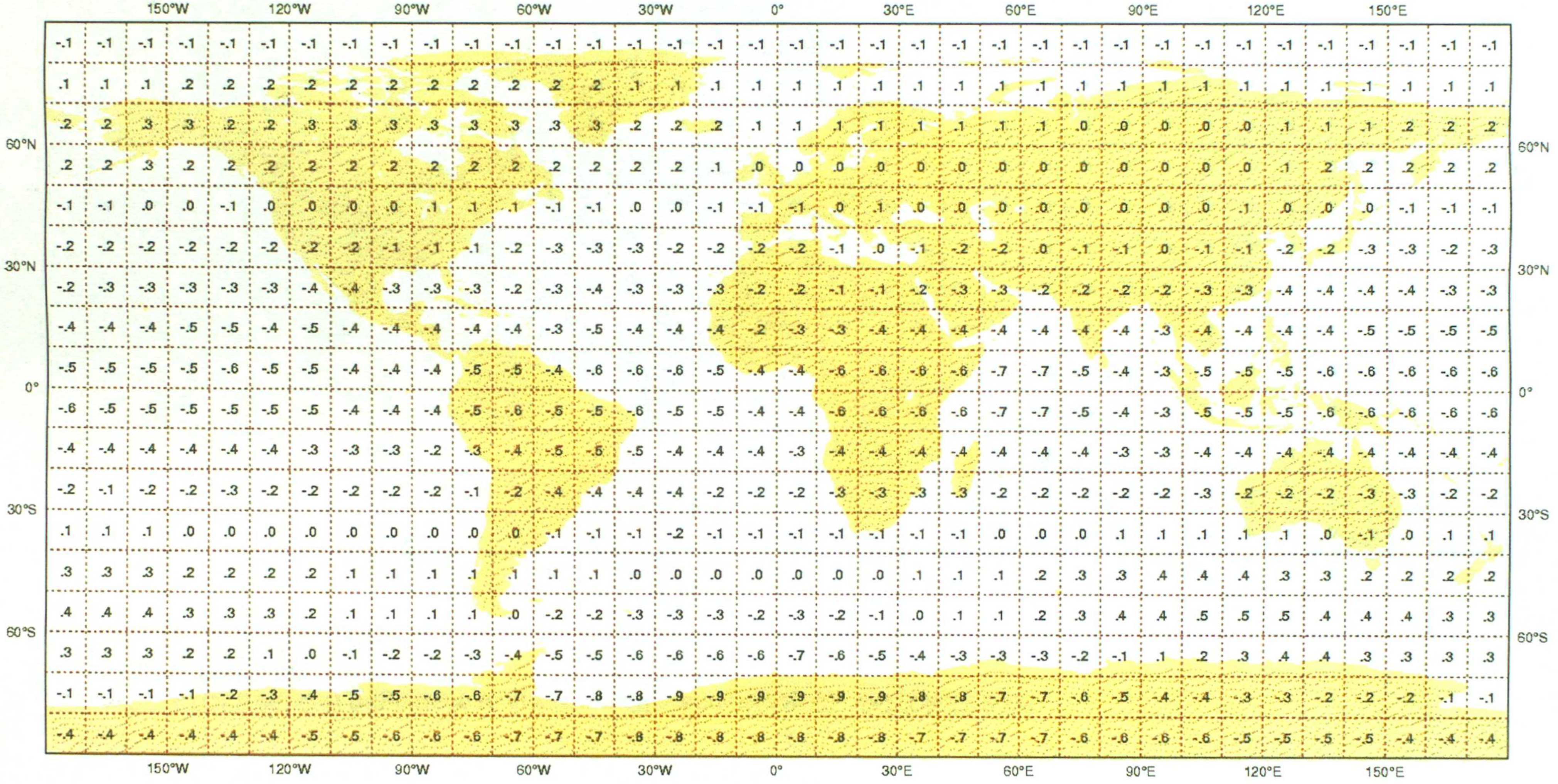
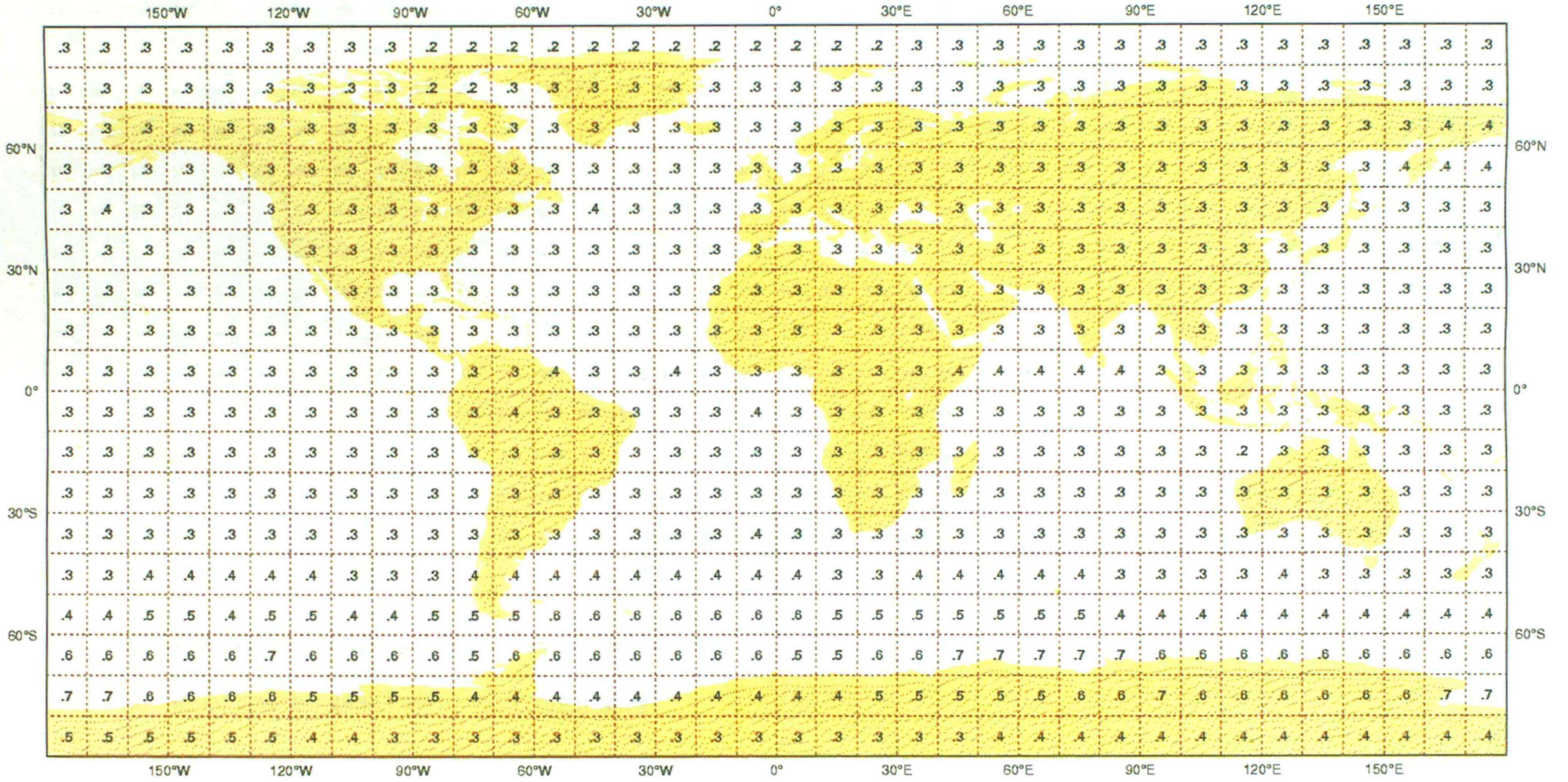

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
.3 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .3 .2 .2 .3 .3 .3 .3 .3 .3 .2 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .4 .4 .4 .3 .4 .4 .4 .4 .4 .4 .3 .4 .4 .3 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .3 .3 .3 .3 .3
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .5 .5 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .4 .4 .4
.5 .4 .4 .4 .4 .4 .5 .4 .5 .5 .5 .5 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .4 .5 .5 .4 .5 .5 .5 .5 .5 .4 .4
.5 .4 .4 .4 .4 .5 .4 .5 .5 .5 .5 .5 .5 .4 .4 .5 .4 .5 .4 .5 .5 .4 .5 .4 .5 .5 .5 .5 .5 .5 .5 .5 .4 .5 .5 .4
.5 .5 .5 .5 .4 .5 .4 .5 .5 .4 .5 .5 .5 .4 .4 .5 .4 .5 .5 .5 .5 .4 .5 .4 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .4
.5 .4 .4 .4 .4 .5 .4 .5 .5 .4 .5 .4 .5 .4 .4 .5 .4 .4 .4 .5 .5 .4 .4 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .4
.5 .5 .5 .4 .4 .4 .4 .4 .4 .4 .5 .5 .4 .4 .4 .5 .4 .4 .5 .5 .4 .4 .4 .4 .4 .5 .4 .4 .5 .4 .5 .5 .5 .5 .5 .4
.4 .5 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .3 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .3 .3 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .3 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .3 .3 .3 .3 .3 .3 .3 .4 .4 .4 .4 .3 .3 .3 .3 .3 .3 .3 .3 .4 .4 .4 .3 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .3 .3 .3 .4 .3 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4

Figure 38. ATOVS MEAN O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: AMSUA-9 (100 hPa)
NOAA15, using all observations



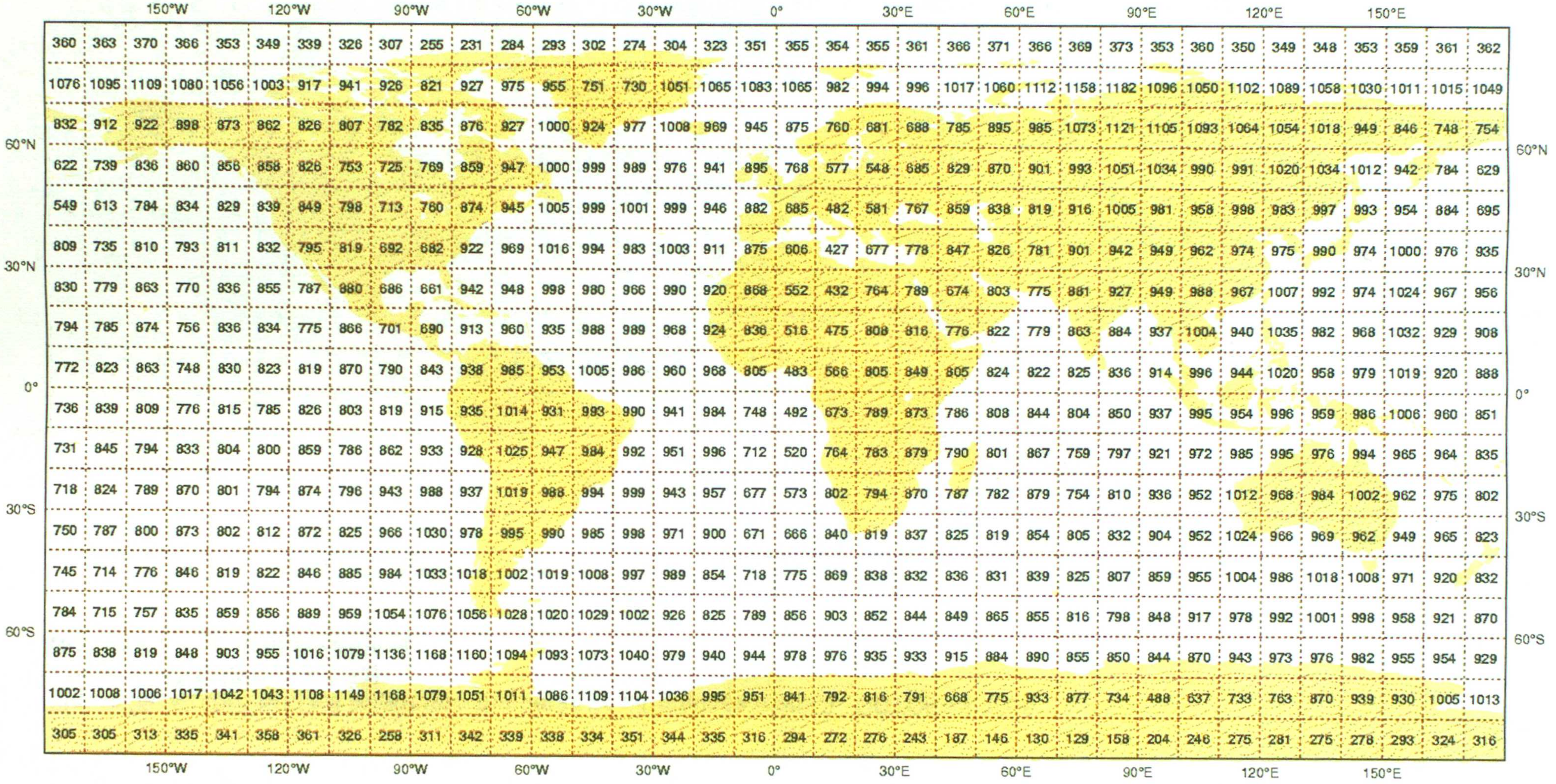
-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1
.1	.1	.1	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
.2	.2	.3	.3	.2	.2	.3	.3	.3	.3	.3	.3	.3	.3	.2	.2	.2	.1	.1	.1	.1	.1	.1	.1	.1	.0	.0	.0	.0	.0	.1	.1	.1	.2	.2	.2
.2	.2	.3	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.2	.2	.2	.2	.2
-.1	-.1	.0	.0	-.1	.0	.0	.0	.0	.1	.1	.1	-.1	-.1	.0	.0	-.1	-.1	-.1	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	-.1	-.1	-.1
-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.2	-.3	-.3	-.3	-.2	-.2	-.2	-.2	-.1	.0	-.1	-.2	-.2	.0	-.1	-.1	.0	-.1	-.1	-.2	-.2	-.3	-.3	-.2	-.3
-.2	-.3	-.3	-.3	-.3	-.3	-.4	-.4	-.3	-.3	-.3	-.2	-.3	-.4	-.3	-.3	-.3	-.2	-.2	-.1	-.1	-.2	-.3	-.3	-.2	-.2	-.2	-.2	-.3	-.3	-.4	-.4	-.4	-.4	-.3	-.3
-.4	-.4	-.4	-.5	-.5	-.4	-.5	-.4	-.4	-.4	-.4	-.4	-.3	-.5	-.4	-.4	-.4	-.2	-.3	-.3	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.4	-.4	-.4	-.4	-.5	-.5	-.5	-.5
-.5	-.5	-.5	-.5	-.6	-.5	-.5	-.4	-.4	-.4	-.5	-.5	-.4	-.6	-.6	-.6	-.5	-.4	-.4	-.6	-.6	-.6	-.6	-.7	-.7	-.5	-.4	-.3	-.5	-.5	-.5	-.6	-.6	-.6	-.6	-.6
-.6	-.5	-.5	-.5	-.5	-.5	-.5	-.4	-.4	-.4	-.5	-.6	-.5	-.5	-.6	-.5	-.5	-.4	-.4	-.6	-.6	-.6	-.6	-.7	-.7	-.5	-.4	-.3	-.5	-.5	-.5	-.6	-.6	-.6	-.6	-.6
-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.3	-.3	-.2	-.3	-.4	-.5	-.5	-.5	-.4	-.4	-.4	-.3	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.3	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4
-.2	-.1	-.2	-.2	-.3	-.2	-.2	-.2	-.2	-.2	-.1	-.2	-.4	-.4	-.4	-.4	-.2	-.2	-.2	-.3	-.3	-.3	-.3	-.2	-.2	-.2	-.2	-.2	-.3	-.2	-.2	-.2	-.3	-.3	-.2	-.2
.1	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	-.1	-.1	-.1	-.2	-.1	-.1	-.1	-.1	-.1	-.1	-.1	.0	.0	.0	.1	.1	.1	.1	.1	.0	-.1	.0	.1	.1
.3	.3	.3	.2	.2	.2	.2	.1	.1	.1	.1	.1	.1	.1	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.2	.3	.3	.4	.4	.4	.3	.3	.2	.2	.2	.2
.4	.4	.4	.3	.3	.3	.2	.1	.1	.1	.1	.0	-.2	-.2	-.3	-.3	-.3	-.2	-.3	-.2	-.1	.0	.1	.1	.2	.3	.4	.4	.5	.5	.5	.4	.4	.4	.3	.3
.3	.3	.3	.2	.2	.1	.0	-.1	-.2	-.2	-.3	-.4	-.5	-.5	-.6	-.6	-.6	-.6	-.7	-.6	-.5	-.4	-.3	-.3	-.3	-.2	-.1	.1	.2	.3	.4	.4	.3	.3	.3	.3
-.1	-.1	-.1	-.1	-.2	-.3	-.4	-.5	-.5	-.6	-.6	-.7	-.7	-.8	-.8	-.9	-.9	-.9	-.9	-.9	-.9	-.8	-.8	-.7	-.7	-.6	-.5	-.4	-.4	-.3	-.3	-.2	-.2	-.2	-.1	-.1
-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.5	-.6	-.6	-.6	-.7	-.7	-.7	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.7	-.7	-.7	-.7	-.6	-.6	-.6	-.6	-.5	-.5	-.5	-.5	-.4	-.4	-.4

Figure 39. ATOVS SD O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: AMSUA-9 (100 hPa)
NOAA15, using all observations



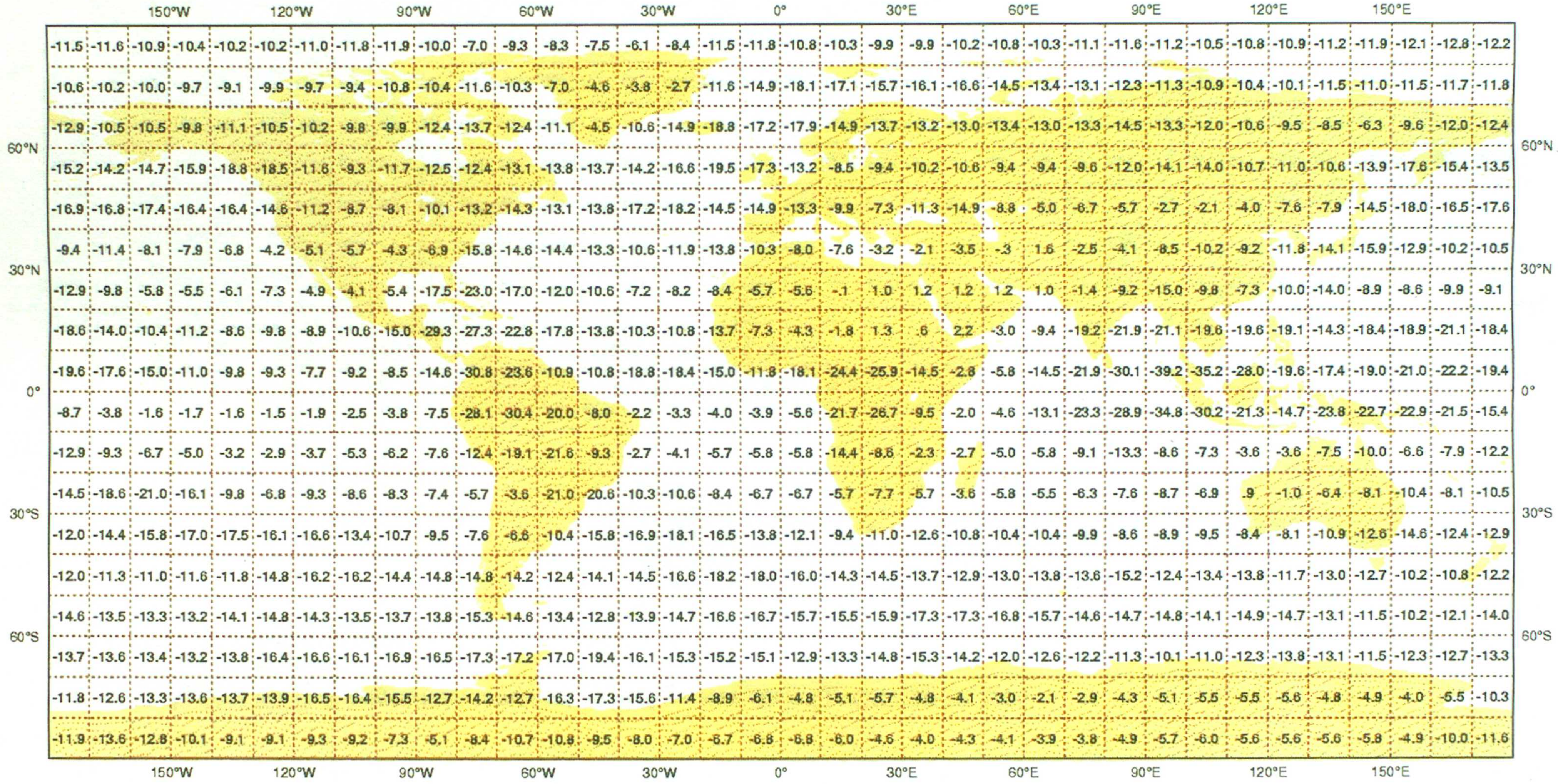
.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4
.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.4	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.4	.4	.4	.4	.4	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.4	.4	.4	.4	.4	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3
.4	.4	.5	.5	.4	.5	.5	.4	.4	.5	.5	.5	.6	.6	.6	.6	.6	.6	.6	.5	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
.6	.6	.6	.6	.6	.7	.6	.6	.6	.6	.5	.6	.6	.6	.6	.6	.6	.6	.5	.5	.6	.6	.7	.7	.7	.7	.7	.6	.6	.6	.6	.6	.6	.6	.6	.6
.7	.7	.6	.6	.6	.6	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.6	.6	.7	.6	.6	.6	.6	.6	.6	.7	.7
.5	.5	.5	.5	.5	.5	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4

Figure 40. ATOVS mean daily count. OCTOBER 2005
NOAA16, using all observations
Global average number of observations in 24 hours = 536329



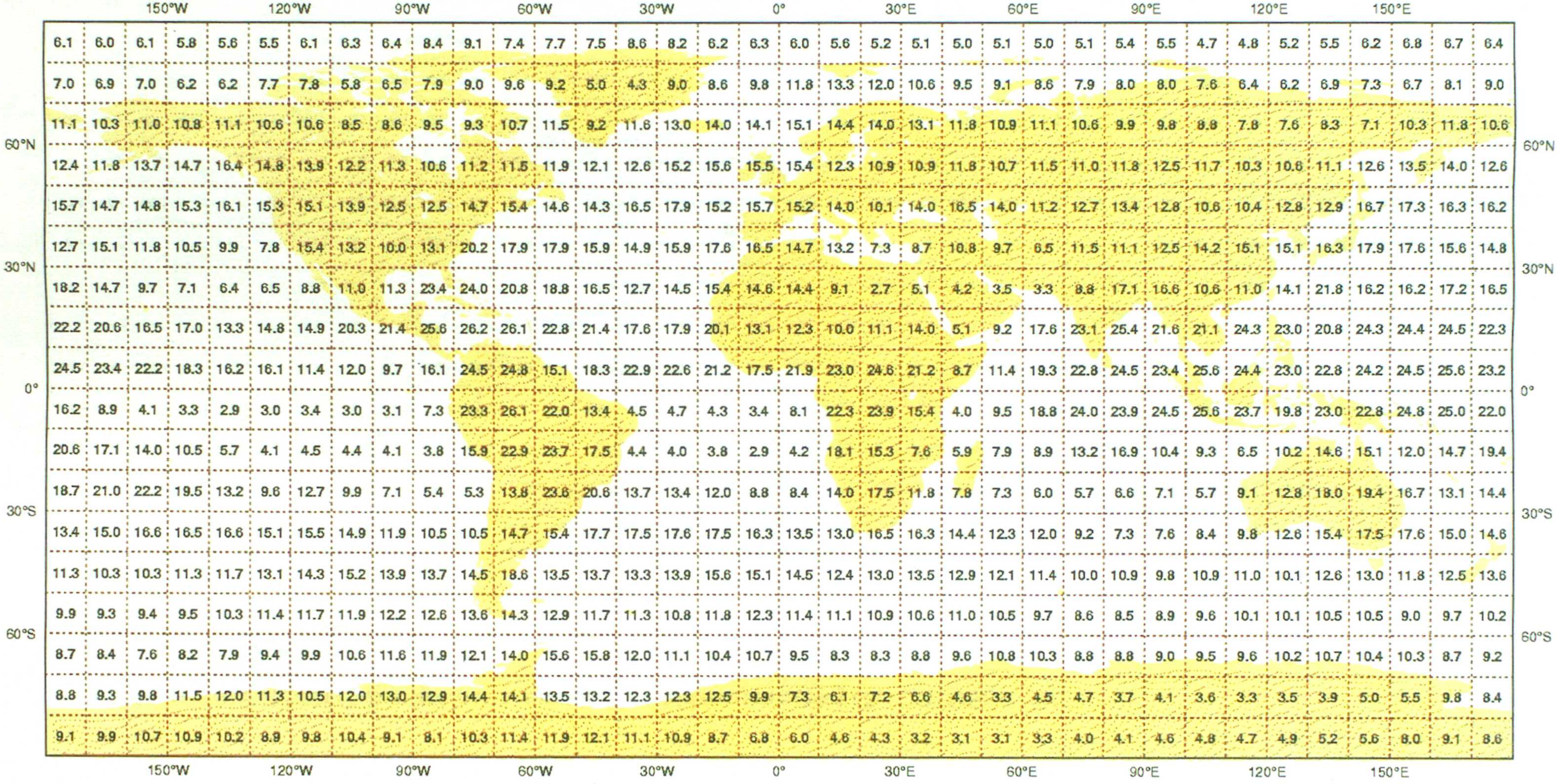
360	363	370	366	353	349	339	326	307	255	231	284	293	302	274	304	323	351	355	354	355	361	366	371	366	369	373	353	360	350	349	348	353	359	361	362
1076	1095	1109	1080	1056	1003	917	941	926	821	927	975	955	751	730	1051	1065	1083	1065	982	994	996	1017	1060	1112	1158	1182	1096	1050	1102	1089	1058	1030	1011	1015	1049
832	912	922	898	873	862	826	807	782	835	876	927	1000	924	977	1008	969	945	875	760	681	688	785	895	985	1073	1121	1105	1093	1064	1054	1018	949	846	748	754
622	739	836	860	856	858	826	753	725	769	859	947	1000	999	989	976	941	895	768	577	548	685	829	870	901	993	1051	1034	990	991	1020	1034	1012	942	784	629
549	613	784	834	829	839	849	798	713	760	874	945	1005	999	1001	999	946	882	685	482	581	767	859	838	819	916	1005	981	958	998	983	997	993	954	884	695
809	735	810	793	811	832	795	819	692	682	922	969	1016	994	983	1003	911	875	606	427	677	778	847	826	781	901	942	949	962	974	975	990	974	1000	976	935
830	779	863	770	836	855	787	880	686	661	942	948	998	980	966	990	920	868	552	432	764	789	674	803	775	881	927	949	988	967	1007	992	974	1024	967	956
794	785	874	756	836	834	775	866	701	690	913	960	935	988	989	968	924	836	516	475	808	816	776	822	779	863	884	937	1004	940	1035	982	968	1032	929	908
772	823	863	748	830	823	819	870	790	843	938	985	953	1005	986	960	968	805	483	566	805	849	805	824	822	825	836	914	996	944	1020	958	979	1019	920	888
736	839	809	776	815	785	826	803	819	915	935	1014	931	993	990	941	984	748	492	673	789	873	786	808	844	804	850	937	995	954	996	959	986	1006	960	851
731	845	794	833	804	800	859	786	862	933	928	1025	947	984	992	951	996	712	520	764	783	879	790	801	867	759	797	921	972	985	995	976	994	965	964	835
718	824	789	870	801	794	874	796	943	988	937	1019	988	994	999	943	957	677	573	802	794	870	787	782	879	754	810	936	952	1012	968	984	1002	962	975	802
750	787	800	873	802	812	872	825	966	1030	978	995	990	985	998	971	900	671	666	840	819	837	825	819	854	805	832	904	952	1024	966	969	962	949	965	823
745	714	776	846	819	822	846	885	984	1033	1018	1002	1019	1008	997	989	854	718	775	869	838	832	836	831	839	825	807	859	955	1004	986	1018	1008	971	920	832
784	715	757	835	859	856	889	959	1054	1076	1056	1028	1020	1029	1002	926	825	789	856	903	852	844	849	865	855	816	798	848	917	978	992	1001	998	958	921	870
875	838	819	848	903	955	1016	1079	1136	1168	1160	1094	1093	1073	1040	979	940	944	978	976	935	933	915	884	890	855	850	844	870	943	973	976	982	955	954	929
1002	1008	1006	1017	1042	1043	1108	1149	1168	1079	1051	1011	1086	1109	1104	1036	995	951	841	792	816	791	668	775	933	877	734	488	637	733	763	870	939	930	1005	1013
305	305	313	335	341	358	361	326	258	311	342	339	338	334	351	344	335	316	294	272	276	243	187	146	130	129	158	204	246	275	281	275	278	293	324	316

Figure 41. ATOVS MEAN O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS8 (Surface)
NOAA16, using all observations



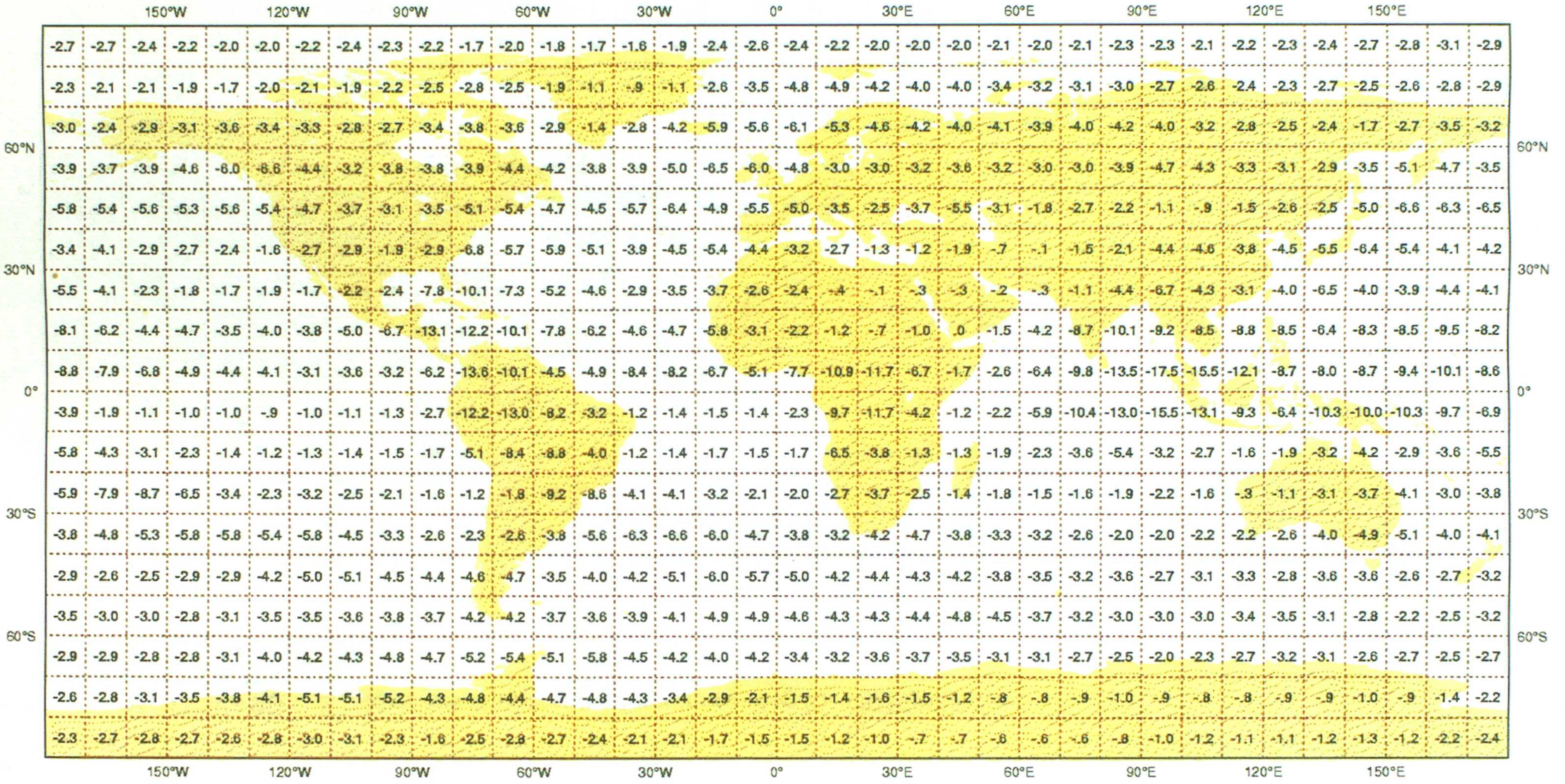
-11.5	-11.6	-10.9	-10.4	-10.2	-10.2	-11.0	-11.8	-11.9	-10.0	-7.0	-9.3	-8.3	-7.5	-6.1	-8.4	-11.5	-11.8	-10.8	-10.3	-9.9	-9.9	-10.2	-10.8	-10.3	-11.1	-11.6	-11.2	-10.5	-10.8	-10.9	-11.2	-11.9	-12.1	-12.8	-12.2
-10.6	-10.2	-10.0	-9.7	-9.1	-9.9	-9.7	-9.4	-10.8	-10.4	-11.6	-10.3	-7.0	-4.6	-3.8	-2.7	-11.6	-14.9	-18.1	-17.1	-15.7	-16.1	-16.6	-14.5	-13.4	-13.1	-12.3	-11.3	-10.9	-10.4	-10.1	-11.5	-11.0	-11.5	-11.7	-11.8
-12.9	-10.5	-10.5	-9.8	-11.1	-10.5	-10.2	-9.8	-9.9	-12.4	-13.7	-12.4	-11.1	-4.5	-10.6	-14.9	-18.8	-17.2	-17.9	-14.9	-13.7	-13.2	-13.0	-13.4	-13.0	-13.3	-14.5	-13.3	-12.0	-10.6	-9.5	-8.5	-6.3	-9.6	-12.0	-12.4
-15.2	-14.2	-14.7	-15.9	-18.8	-18.5	-11.6	-9.3	-11.7	-12.5	-12.4	-13.1	-13.8	-13.7	-14.2	-16.6	-19.5	-17.3	-13.2	-8.5	-9.4	-10.2	-10.6	-9.4	-9.4	-9.6	-12.0	-14.1	-14.0	-10.7	-11.0	-10.6	-13.9	-17.6	-15.4	-13.5
-16.9	-16.8	-17.4	-16.4	-16.4	-14.6	-11.2	-8.7	-8.1	-10.1	-13.2	-14.3	-13.1	-13.8	-17.2	-18.2	-14.5	-14.9	-13.3	-9.9	-7.3	-11.3	-14.9	-8.8	-5.0	-6.7	-5.7	-2.7	-2.1	-4.0	-7.6	-7.9	-14.5	-18.0	-16.5	-17.6
-9.4	-11.4	-8.1	-7.9	-6.8	-4.2	-5.1	-5.7	-4.3	-6.9	-15.8	-14.6	-14.4	-13.3	-10.6	-11.9	-13.8	-10.3	-8.0	-7.6	-3.2	-2.1	-3.5	-3	1.6	-2.5	-4.1	-8.5	-10.2	-9.2	-11.8	-14.1	-15.9	-12.9	-10.2	-10.5
-12.9	-9.8	-5.8	-5.5	-6.1	-7.3	-4.9	-4.1	-5.4	-17.5	-23.0	-17.0	-12.0	-10.6	-7.2	-8.2	-8.4	-5.7	-5.6	-.1	1.0	1.2	1.2	1.2	1.0	-1.4	-9.2	-15.0	-9.8	-7.3	-10.0	-14.0	-8.9	-8.6	-9.9	-9.1
-18.6	-14.0	-10.4	-11.2	-8.6	-9.8	-8.9	-10.6	-15.0	-29.3	-27.3	-22.8	-17.8	-13.8	-10.3	-10.8	-13.7	-7.3	-4.3	-1.8	1.3	.6	2.2	-3.0	-9.4	-19.2	-21.9	-21.1	-19.6	-19.6	-19.1	-14.3	-18.4	-18.9	-21.1	-18.4
-19.6	-17.6	-15.0	-11.0	-9.8	-9.3	-7.7	-9.2	-8.5	-14.6	-30.8	-23.6	-10.9	-10.8	-18.8	-18.4	-15.0	-11.8	-18.1	-24.4	-25.9	-14.5	-2.8	-5.8	-14.5	-21.9	-30.1	-39.2	-35.2	-28.0	-19.6	-17.4	-19.0	-21.0	-22.2	-19.4
-8.7	-3.8	-1.6	-1.7	-1.6	-1.5	-1.9	-2.5	-3.8	-7.5	-28.1	-30.4	-20.0	-8.0	-2.2	-3.3	-4.0	-3.9	-5.6	-21.7	-26.7	-9.5	-2.0	-4.6	-13.1	-23.3	-28.9	-34.8	-30.2	-21.3	-14.7	-23.8	-22.7	-22.9	-21.5	-15.4
-12.9	-9.3	-6.7	-5.0	-3.2	-2.9	-3.7	-5.3	-6.2	-7.6	-12.4	-19.1	-21.6	-9.3	-2.7	-4.1	-5.7	-5.8	-5.8	-14.4	-8.6	-2.3	-2.7	-5.0	-5.8	-9.1	-13.3	-8.6	-7.3	-3.6	-3.6	-7.5	-10.0	-6.6	-7.9	-12.2
-14.5	-18.6	-21.0	-16.1	-9.8	-6.8	-9.3	-8.6	-8.3	-7.4	-5.7	-3.6	-21.0	-20.6	-10.3	-10.6	-8.4	-6.7	-6.7	-5.7	-7.7	-5.7	-3.6	-5.8	-5.5	-6.3	-7.6	-8.7	-6.9	.9	-1.0	-6.4	-8.1	-10.4	-8.1	-10.5
-12.0	-14.4	-15.8	-17.0	-17.5	-16.1	-16.6	-13.4	-10.7	-9.5	-7.6	-6.6	-10.4	-15.8	-16.9	-18.1	-16.5	-13.8	-12.1	-9.4	-11.0	-12.6	-10.8	-10.4	-10.4	-9.9	-8.6	-8.9	-9.5	-8.4	-8.1	-10.9	-12.6	-14.6	-12.4	-12.9
-12.0	-11.3	-11.0	-11.6	-11.8	-14.8	-16.2	-16.2	-14.4	-14.8	-14.8	-14.2	-12.4	-14.1	-14.5	-16.6	-18.2	-18.0	-16.0	-14.3	-14.5	-13.7	-12.9	-13.0	-13.8	-13.6	-15.2	-12.4	-13.4	-13.8	-11.7	-13.0	-12.7	-10.2	-10.8	-12.2
-14.6	-13.5	-13.3	-13.2	-14.1	-14.8	-14.3	-13.5	-13.7	-13.8	-15.3	-14.6	-13.4	-12.8	-13.9	-14.7	-16.6	-16.7	-15.7	-15.5	-15.9	-17.3	-17.3	-16.8	-15.7	-14.6	-14.7	-14.8	-14.1	-14.9	-14.7	-13.1	-11.5	-10.2	-12.1	-14.0
-13.7	-13.6	-13.4	-13.2	-13.8	-16.4	-16.6	-16.1	-16.9	-16.5	-17.3	-17.2	-17.0	-19.4	-16.1	-15.3	-15.2	-15.1	-12.9	-13.3	-14.8	-15.3	-14.2	-12.0	-12.6	-12.2	-11.3	-10.1	-11.0	-12.3	-13.8	-13.1	-11.5	-12.3	-12.7	-13.3
-11.8	-12.6	-13.3	-13.6	-13.7	-13.9	-16.5	-16.4	-15.5	-12.7	-14.2	-12.7	-16.3	-17.3	-15.6	-11.4	-8.9	-6.1	-4.8	-5.1	-5.7	-4.8	-4.1	-3.0	-2.1	-2.9	-4.3	-5.1	-5.5	-5.5	-5.6	-4.8	-4.9	-4.0	-5.5	-10.3
-11.9	-13.6	-12.8	-10.1	-9.1	-9.1	-9.3	-9.2	-7.3	-5.1	-8.4	-10.7	-10.8	-9.5	-8.0	-7.0	-6.7	-6.8	-6.8	-6.0	-4.6	-4.0	-4.3	-4.1	-3.9	-3.8	-4.9	-5.7	-6.0	-5.6	-5.6	-5.6	-5.8	-4.9	-10.0	-11.6

Figure 42. ATOVS SD O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS8 (Surface)
NOAA16, using all observations



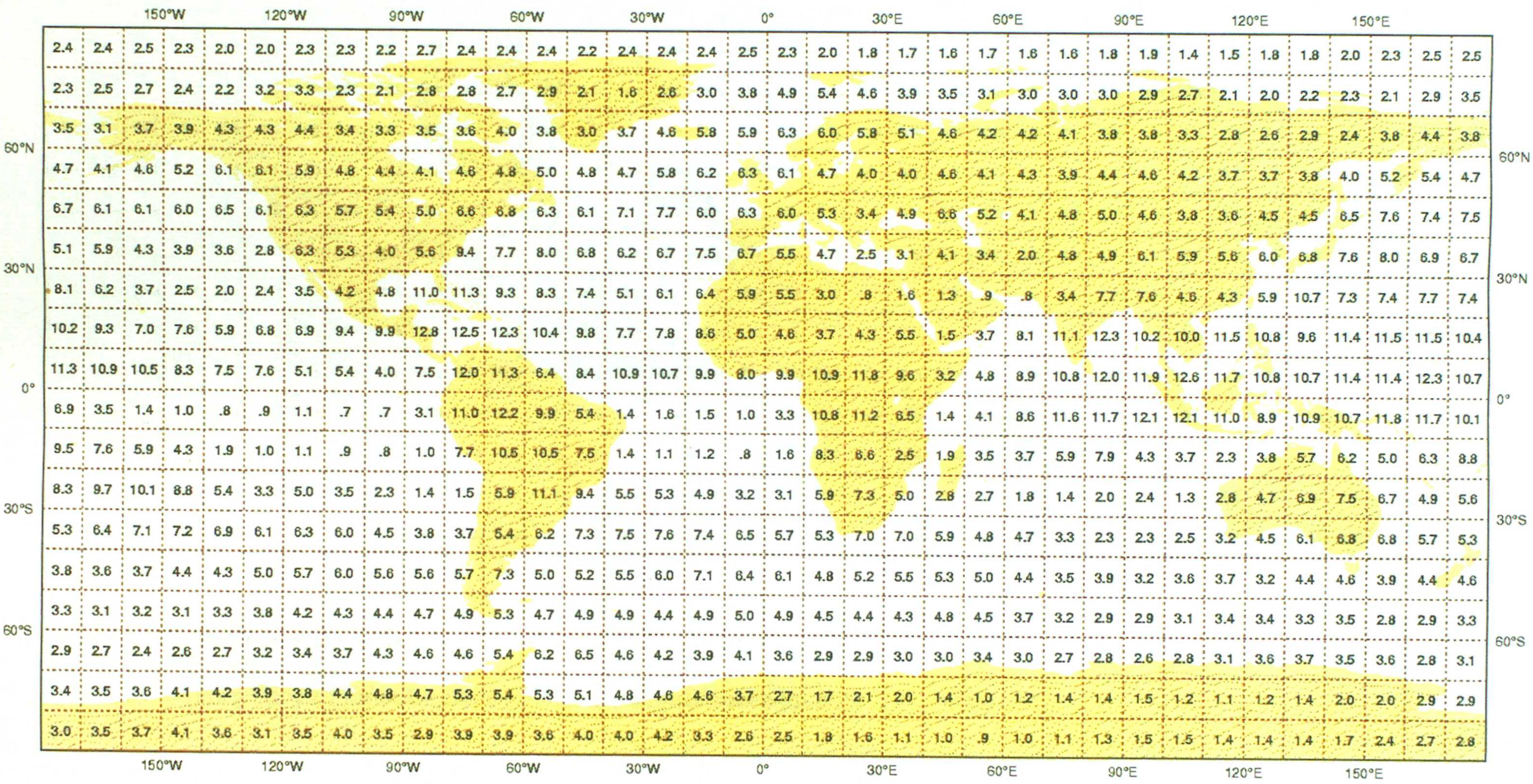
6.1	6.0	6.1	5.8	5.6	5.5	6.1	6.3	6.4	8.4	9.1	7.4	7.7	7.5	8.6	8.2	6.2	6.3	6.0	5.6	5.2	5.1	5.0	5.1	5.0	5.1	5.4	5.5	4.7	4.8	5.2	5.5	6.2	6.8	6.7	6.4
7.0	6.9	7.0	6.2	6.2	7.7	7.8	5.8	6.5	7.9	9.0	9.6	9.2	5.0	4.3	9.0	8.6	9.8	11.8	13.3	12.0	10.6	9.5	9.1	8.6	7.9	8.0	8.0	7.6	6.4	6.2	6.9	7.3	6.7	8.1	9.0
11.1	10.3	11.0	10.8	11.1	10.6	10.6	8.5	8.6	9.5	9.3	10.7	11.5	9.2	11.6	13.0	14.0	14.1	15.1	14.4	14.0	13.1	11.8	10.9	11.1	10.6	9.9	9.8	8.8	7.8	7.6	8.3	7.1	10.3	11.8	10.6
12.4	11.8	13.7	14.7	16.4	14.8	13.9	12.2	11.3	10.6	11.2	11.5	11.9	12.1	12.6	15.2	15.6	15.5	15.4	12.3	10.9	10.9	11.8	10.7	11.5	11.0	11.8	12.5	11.7	10.3	10.6	11.1	12.6	13.5	14.0	12.6
15.7	14.7	14.8	15.3	16.1	15.3	15.1	13.9	12.5	12.5	14.7	15.4	14.6	14.3	16.5	17.9	15.2	15.7	15.2	14.0	10.1	14.0	16.5	14.0	11.2	12.7	13.4	12.8	10.6	10.4	12.8	12.9	16.7	17.3	16.3	16.2
12.7	15.1	11.8	10.5	9.9	7.8	15.4	13.2	10.0	13.1	20.2	17.9	17.9	15.9	14.9	15.9	17.6	16.5	14.7	13.2	7.3	8.7	10.8	9.7	6.5	11.5	11.1	12.5	14.2	15.1	15.1	16.3	17.9	17.6	15.6	14.8
18.2	14.7	9.7	7.1	6.4	6.5	8.8	11.0	11.3	23.4	24.0	20.8	18.8	16.5	12.7	14.5	15.4	14.6	14.4	9.1	2.7	5.1	4.2	3.5	3.3	8.8	17.1	16.6	10.6	11.0	14.1	21.8	16.2	16.2	17.2	16.5
22.2	20.6	16.5	17.0	13.3	14.8	14.9	20.3	21.4	25.6	26.2	26.1	22.8	21.4	17.6	17.9	20.1	13.1	12.3	10.0	11.1	14.0	5.1	9.2	17.6	23.1	25.4	21.6	21.1	24.3	23.0	20.8	24.3	24.4	24.5	22.3
24.5	23.4	22.2	18.3	16.2	16.1	11.4	12.0	9.7	16.1	24.5	24.8	15.1	18.3	22.9	22.6	21.2	17.5	21.9	23.0	24.6	21.2	8.7	11.4	19.3	22.8	24.5	23.4	25.6	24.4	23.0	22.8	24.2	24.5	25.6	23.2
16.2	8.9	4.1	3.3	2.9	3.0	3.4	3.0	3.1	7.3	23.3	26.1	22.0	13.4	4.5	4.7	4.3	3.4	8.1	22.3	23.9	15.4	4.0	9.5	18.8	24.0	23.9	24.5	25.6	23.7	19.8	23.0	22.8	24.8	25.0	22.0
20.6	17.1	14.0	10.5	5.7	4.1	4.5	4.4	4.1	3.8	15.9	22.9	23.7	17.5	4.4	4.0	3.8	2.9	4.2	18.1	15.3	7.6	5.9	7.9	8.9	13.2	16.9	10.4	9.3	6.5	10.2	14.6	15.1	12.0	14.7	19.4
18.7	21.0	22.2	19.5	13.2	9.6	12.7	9.9	7.1	5.4	5.3	13.8	23.6	20.6	13.7	13.4	12.0	8.8	8.4	14.0	17.5	11.8	7.8	7.3	6.0	5.7	6.6	7.1	5.7	9.1	12.8	18.0	19.4	16.7	13.1	14.4
13.4	15.0	16.6	16.5	16.6	15.1	15.5	14.9	11.9	10.5	10.5	14.7	15.4	17.7	17.5	17.6	17.5	16.3	13.5	13.0	16.5	16.3	14.4	12.3	12.0	9.2	7.3	7.6	8.4	9.8	12.6	15.4	17.5	17.6	15.0	14.6
11.3	10.3	10.3	11.3	11.7	13.1	14.3	15.2	13.9	13.7	14.5	18.6	13.5	13.7	13.3	13.9	15.6	15.1	14.5	12.4	13.0	13.5	12.9	12.1	11.4	10.0	10.9	9.8	10.9	11.0	10.1	12.6	13.0	11.8	12.5	13.6
9.9	9.3	9.4	9.5	10.3	11.4	11.7	11.9	12.2	12.6	13.6	14.3	12.9	11.7	11.3	10.8	11.8	12.3	11.4	11.1	10.9	10.6	11.0	10.5	9.7	8.6	8.5	8.9	9.6	10.1	10.1	10.5	10.5	9.0	9.7	10.2
8.7	8.4	7.6	8.2	7.9	9.4	9.9	10.6	11.6	11.9	12.1	14.0	15.6	15.8	12.0	11.1	10.4	10.7	9.5	8.3	8.3	8.8	9.6	10.8	10.3	8.8	8.8	9.0	9.5	9.6	10.2	10.7	10.4	10.3	8.7	9.2
8.8	9.3	9.8	11.5	12.0	11.3	10.5	12.0	13.0	12.9	14.4	14.1	13.5	13.2	12.3	12.3	12.5	9.9	7.3	6.1	7.2	6.6	4.6	3.3	4.5	4.7	3.7	4.1	3.6	3.3	3.5	3.9	5.0	5.5	9.8	8.4
9.1	9.9	10.7	10.9	10.2	8.9	9.8	10.4	9.1	8.1	10.3	11.4	11.9	12.1	11.1	10.9	8.7	6.8	6.0	4.6	4.3	3.2	3.1	3.1	3.3	4.0	4.1	4.6	4.8	4.7	4.9	5.2	5.6	8.0	9.1	8.6

Figure 43. ATOVS MEAN O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS15 (700 hPa)
NOAA16, using all observations



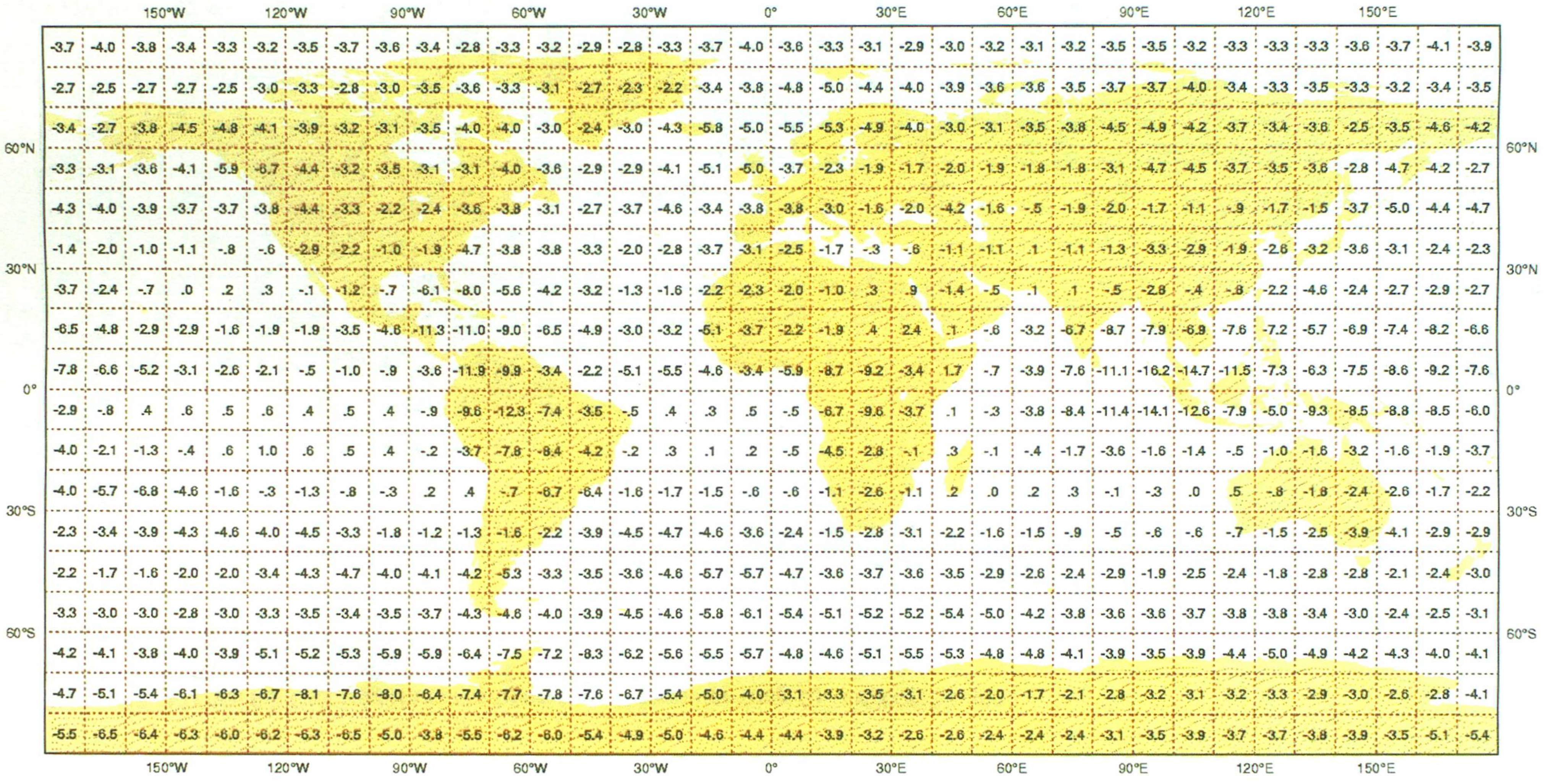
-2.7	-2.7	-2.4	-2.2	-2.0	-2.0	-2.2	-2.4	-2.3	-2.2	-1.7	-2.0	-1.8	-1.7	-1.6	-1.9	-2.4	-2.6	-2.4	-2.2	-2.0	-2.0	-2.0	-2.1	-2.0	-2.1	-2.3	-2.3	-2.1	-2.2	-2.3	-2.4	-2.7	-2.8	-3.1	-2.9
-2.3	-2.1	-2.1	-1.9	-1.7	-2.0	-2.1	-1.9	-2.2	-2.5	-2.8	-2.5	-1.9	-1.1	-.9	-1.1	-2.6	-3.5	-4.8	-4.9	-4.2	-4.0	-4.0	-3.4	-3.2	-3.1	-3.0	-2.7	-2.6	-2.4	-2.3	-2.7	-2.5	-2.6	-2.8	-2.9
-3.0	-2.4	-2.9	-3.1	-3.6	-3.4	-3.3	-2.8	-2.7	-3.4	-3.8	-3.6	-2.9	-1.4	-2.8	-4.2	-5.9	-5.6	-6.1	-5.3	-4.6	-4.2	-4.0	-4.1	-3.9	-4.0	-4.2	-4.0	-3.2	-2.8	-2.5	-2.4	-1.7	-2.7	-3.5	-3.2
-3.9	-3.7	-3.9	-4.6	-6.0	-6.6	-4.4	-3.2	-3.8	-3.8	-3.9	-4.4	-4.2	-3.8	-3.9	-5.0	-6.5	-6.0	-4.8	-3.0	-3.0	-3.2	-3.6	-3.2	-3.0	-3.0	-3.9	-4.7	-4.3	-3.3	-3.1	-2.9	-3.5	-5.1	-4.7	-3.5
-5.8	-5.4	-5.6	-5.3	-5.6	-5.4	-4.7	-3.7	-3.1	-3.5	-5.1	-5.4	-4.7	-4.5	-5.7	-6.4	-4.9	-5.5	-5.0	-3.5	-2.5	-3.7	-5.5	-3.1	-1.8	-2.7	-2.2	-1.1	-.9	-1.5	-2.6	-2.5	-5.0	-6.6	-6.3	-6.5
-3.4	-4.1	-2.9	-2.7	-2.4	-1.6	-2.7	-2.9	-1.9	-2.9	-6.8	-5.7	-5.9	-5.1	-3.9	-4.5	-5.4	-4.4	-3.2	-2.7	-1.3	-1.2	-1.9	-.7	-.1	-1.5	-2.1	-4.4	-4.6	-3.8	-4.5	-5.5	-6.4	-5.4	-4.1	-4.2
-5.5	-4.1	-2.3	-1.8	-1.7	-1.9	-1.7	-2.2	-2.4	-7.8	-10.1	-7.3	-5.2	-4.6	-2.9	-3.5	-3.7	-2.6	-2.4	-.4	-.1	-.3	-.3	-.2	-.3	-1.1	-4.4	-6.7	-4.3	-3.1	-4.0	-6.5	-4.0	-3.9	-4.4	-4.1
-8.1	-6.2	-4.4	-4.7	-3.5	-4.0	-3.8	-5.0	-6.7	-13.1	-12.2	-10.1	-7.8	-6.2	-4.6	-4.7	-5.8	-3.1	-2.2	-1.2	-.7	-1.0	.0	-1.5	-4.2	-8.7	-10.1	-9.2	-8.5	-8.8	-8.5	-6.4	-8.3	-8.5	-9.5	-8.2
-8.8	-7.9	-6.8	-4.9	-4.4	-4.1	-3.1	-3.6	-3.2	-6.2	-13.6	-10.1	-4.5	-4.9	-8.4	-8.2	-6.7	-5.1	-7.7	-10.9	-11.7	-6.7	-1.7	-2.6	-6.4	-9.8	-13.5	-17.5	-15.5	-12.1	-8.7	-8.0	-8.7	-9.4	-10.1	-8.6
-3.9	-1.9	-1.1	-1.0	-1.0	-.9	-1.0	-1.1	-1.3	-2.7	-12.2	-13.0	-8.2	-3.2	-1.2	-1.4	-1.5	-1.4	-2.3	-9.7	-11.7	-4.2	-1.2	-2.2	-5.9	-10.4	-13.0	-15.5	-13.1	-9.3	-6.4	-10.3	-10.0	-10.3	-9.7	-6.9
-5.8	-4.3	-3.1	-2.3	-1.4	-1.2	-1.3	-1.4	-1.5	-1.7	-5.1	-8.4	-8.8	-4.0	-1.2	-1.4	-1.7	-1.5	-1.7	-6.5	-3.8	-1.3	-1.3	-1.9	-2.3	-3.6	-5.4	-3.2	-2.7	-1.6	-1.9	-3.2	-4.2	-2.9	-3.6	-5.5
-5.9	-7.9	-8.7	-6.5	-3.4	-2.3	-3.2	-2.5	-2.1	-1.6	-1.2	-1.8	-9.2	-8.6	-4.1	-4.1	-3.2	-2.1	-2.0	-2.7	-3.7	-2.5	-1.4	-1.8	-1.5	-1.6	-1.9	-2.2	-1.6	-.3	-1.1	-3.1	-3.7	-4.1	-3.0	-3.8
-3.8	-4.8	-5.3	-5.8	-5.8	-5.4	-5.8	-4.5	-3.3	-2.6	-2.3	-2.6	-3.8	-5.6	-6.3	-6.6	-6.0	-4.7	-3.8	-3.2	-4.2	-4.7	-3.8	-3.3	-3.2	-2.6	-2.0	-2.0	-2.2	-2.2	-2.6	-4.0	-4.9	-5.1	-4.0	-4.1
-2.9	-2.6	-2.5	-2.9	-2.9	-4.2	-5.0	-5.1	-4.5	-4.4	-4.6	-4.7	-3.5	-4.0	-4.2	-5.1	-6.0	-5.7	-5.0	-4.2	-4.4	-4.3	-4.2	-3.8	-3.5	-3.2	-3.6	-2.7	-3.1	-3.3	-2.8	-3.6	-3.6	-2.6	-2.7	-3.2
-3.5	-3.0	-3.0	-2.8	-3.1	-3.5	-3.5	-3.6	-3.8	-3.7	-4.2	-4.2	-3.7	-3.6	-3.9	-4.1	-4.9	-4.9	-4.6	-4.3	-4.3	-4.4	-4.8	-4.5	-3.7	-3.2	-3.0	-3.0	-3.0	-3.4	-3.5	-3.1	-2.8	-2.2	-2.5	-3.2
-2.9	-2.9	-2.8	-2.8	-3.1	-4.0	-4.2	-4.3	-4.8	-4.7	-5.2	-5.4	-5.1	-5.8	-4.5	-4.2	-4.0	-4.2	-3.4	-3.2	-3.6	-3.7	-3.5	-3.1	-3.1	-2.7	-2.5	-2.0	-2.3	-2.7	-3.2	-3.1	-2.6	-2.7	-2.5	-2.7
-2.6	-2.8	-3.1	-3.5	-3.8	-4.1	-5.1	-5.1	-5.2	-4.3	-4.8	-4.4	-4.7	-4.8	-4.3	-3.4	-2.9	-2.1	-1.5	-1.4	-1.6	-1.5	-1.2	-.8	-.8	-.9	-1.0	-.9	-.8	-.8	-.9	-.9	-1.0	-.9	-1.4	-2.2
-2.3	-2.7	-2.8	-2.7	-2.6	-2.8	-3.0	-3.1	-2.3	-1.6	-2.5	-2.8	-2.7	-2.4	-2.1	-2.1	-1.7	-1.5	-1.5	-1.2	-1.0	-.7	-.7	-.6	-.6	-.6	-.8	-1.0	-1.2	-1.1	-1.1	-1.2	-1.3	-1.2	-2.2	-2.4

Figure 44. ATOVS SD O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS15 (700 hPa)
NOAA16, using all observations



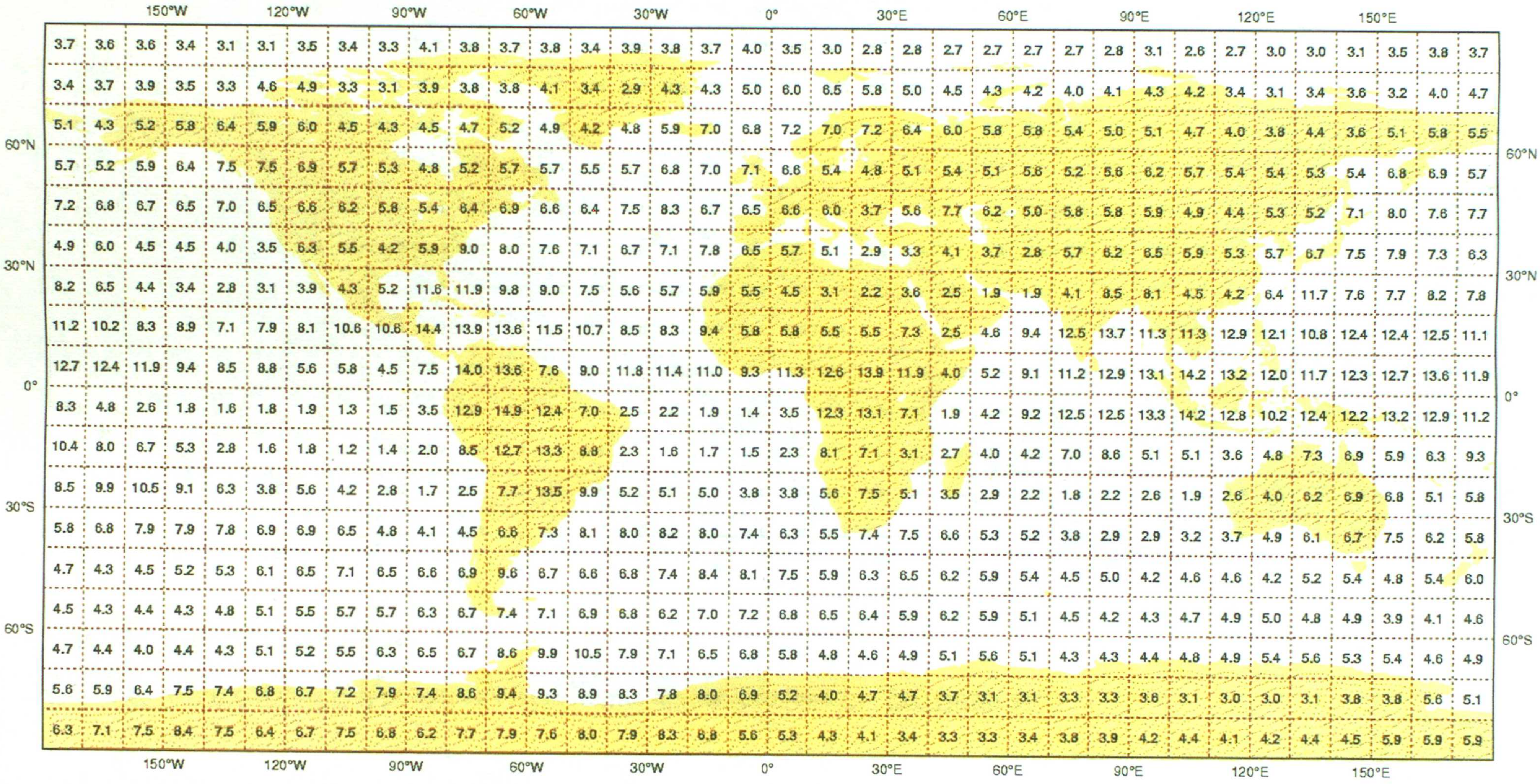
2.4	2.4	2.5	2.3	2.0	2.0	2.3	2.3	2.2	2.7	2.4	2.4	2.4	2.2	2.4	2.4	2.4	2.5	2.3	2.0	1.8	1.7	1.6	1.7	1.6	1.6	1.8	1.9	1.4	1.5	1.8	1.8	2.0	2.3	2.5	2.5
2.3	2.5	2.7	2.4	2.2	3.2	3.3	2.3	2.1	2.8	2.8	2.7	2.9	2.1	1.6	2.6	3.0	3.8	4.9	5.4	4.6	3.9	3.5	3.1	3.0	3.0	3.0	2.9	2.7	2.1	2.0	2.2	2.3	2.1	2.9	3.5
3.5	3.1	3.7	3.9	4.3	4.3	4.4	3.4	3.3	3.5	3.6	4.0	3.8	3.0	3.7	4.6	5.8	5.9	6.3	6.0	5.8	5.1	4.6	4.2	4.2	4.1	3.8	3.8	3.3	2.8	2.6	2.9	2.4	3.8	4.4	3.8
4.7	4.1	4.6	5.2	6.1	6.1	5.9	4.8	4.4	4.1	4.6	4.8	5.0	4.8	4.7	5.8	6.2	6.3	6.1	4.7	4.0	4.0	4.6	4.1	4.3	3.9	4.4	4.6	4.2	3.7	3.7	3.8	4.0	5.2	5.4	4.7
6.7	6.1	6.1	6.0	6.5	6.1	6.3	5.7	5.4	5.0	6.6	6.8	6.3	6.1	7.1	7.7	6.0	6.3	6.0	5.3	3.4	4.9	6.6	5.2	4.1	4.8	5.0	4.6	3.8	3.6	4.5	4.5	6.5	7.6	7.4	7.5
5.1	5.9	4.3	3.9	3.6	2.8	6.3	5.3	4.0	5.6	9.4	7.7	8.0	6.8	6.2	6.7	7.5	6.7	5.5	4.7	2.5	3.1	4.1	3.4	2.0	4.8	4.9	6.1	5.9	5.6	6.0	6.8	7.6	8.0	6.9	6.7
8.1	6.2	3.7	2.5	2.0	2.4	3.5	4.2	4.8	11.0	11.3	9.3	8.3	7.4	5.1	6.1	6.4	5.9	5.5	3.0	.8	1.6	1.3	.9	.8	3.4	7.7	7.6	4.6	4.3	5.9	10.7	7.3	7.4	7.7	7.4
10.2	9.3	7.0	7.6	5.9	6.8	6.9	9.4	9.9	12.8	12.5	12.3	10.4	9.8	7.7	7.8	8.6	5.0	4.6	3.7	4.3	5.5	1.5	3.7	8.1	11.1	12.3	10.2	10.0	11.5	10.8	9.6	11.4	11.5	11.5	10.4
11.3	10.9	10.5	8.3	7.5	7.6	5.1	5.4	4.0	7.5	12.0	11.3	6.4	8.4	10.9	10.7	9.9	8.0	9.9	10.9	11.8	9.6	3.2	4.8	8.9	10.8	12.0	11.9	12.6	11.7	10.8	10.7	11.4	11.4	12.3	10.7
6.9	3.5	1.4	1.0	.8	.9	1.1	.7	.7	3.1	11.0	12.2	9.9	5.4	1.4	1.6	1.5	1.0	3.3	10.8	11.2	6.5	1.4	4.1	8.6	11.6	11.7	12.1	12.1	11.0	8.9	10.9	10.7	11.8	11.7	10.1
9.5	7.6	5.9	4.3	1.9	1.0	1.1	.9	.8	1.0	7.7	10.5	10.5	7.5	1.4	1.1	1.2	.8	1.6	8.3	6.6	2.5	1.9	3.5	3.7	5.9	7.9	4.3	3.7	2.3	3.8	5.7	6.2	5.0	6.3	8.8
8.3	9.7	10.1	8.8	5.4	3.3	5.0	3.5	2.3	1.4	1.5	5.9	11.1	9.4	5.5	5.3	4.9	3.2	3.1	5.9	7.3	5.0	2.8	2.7	1.8	1.4	2.0	2.4	1.3	2.8	4.7	6.9	7.5	6.7	4.9	5.6
5.3	6.4	7.1	7.2	6.9	6.1	6.3	6.0	4.5	3.8	3.7	5.4	6.2	7.3	7.5	7.6	7.4	6.5	5.7	5.3	7.0	7.0	5.9	4.8	4.7	3.3	2.3	2.3	2.5	3.2	4.5	6.1	6.8	6.8	5.7	5.3
3.8	3.6	3.7	4.4	4.3	5.0	5.7	6.0	5.6	5.6	5.7	7.3	5.0	5.2	5.5	6.0	7.1	6.4	6.1	4.8	5.2	5.5	5.3	5.0	4.4	3.5	3.9	3.2	3.6	3.7	3.2	4.4	4.6	3.9	4.4	4.6
3.3	3.1	3.2	3.1	3.3	3.8	4.2	4.3	4.4	4.7	4.9	5.3	4.7	4.9	4.9	4.4	4.9	5.0	4.9	4.5	4.4	4.3	4.8	4.5	3.7	3.2	2.9	2.9	3.1	3.4	3.4	3.3	3.5	2.8	2.9	3.3
2.9	2.7	2.4	2.6	2.7	3.2	3.4	3.7	4.3	4.6	4.6	5.4	6.2	6.5	4.6	4.2	3.9	4.1	3.6	2.9	2.9	3.0	3.0	3.4	3.0	2.7	2.8	2.6	2.8	3.1	3.6	3.7	3.5	3.6	2.8	3.1
3.4	3.5	3.6	4.1	4.2	3.9	3.8	4.4	4.8	4.7	5.3	5.4	5.3	5.1	4.8	4.6	4.6	3.7	2.7	1.7	2.1	2.0	1.4	1.0	1.2	1.4	1.4	1.5	1.2	1.1	1.2	1.4	2.0	2.0	2.9	2.9
3.0	3.5	3.7	4.1	3.6	3.1	3.5	4.0	3.5	2.9	3.9	3.9	3.6	4.0	4.0	4.2	3.3	2.6	2.5	1.8	1.6	1.1	1.0	.9	1.0	1.1	1.3	1.5	1.5	1.4	1.4	1.4	1.7	2.4	2.7	2.8

Figure 45. ATOVS MEAN O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS11 (500 - 700 hPa)
NOAA16, using all observations



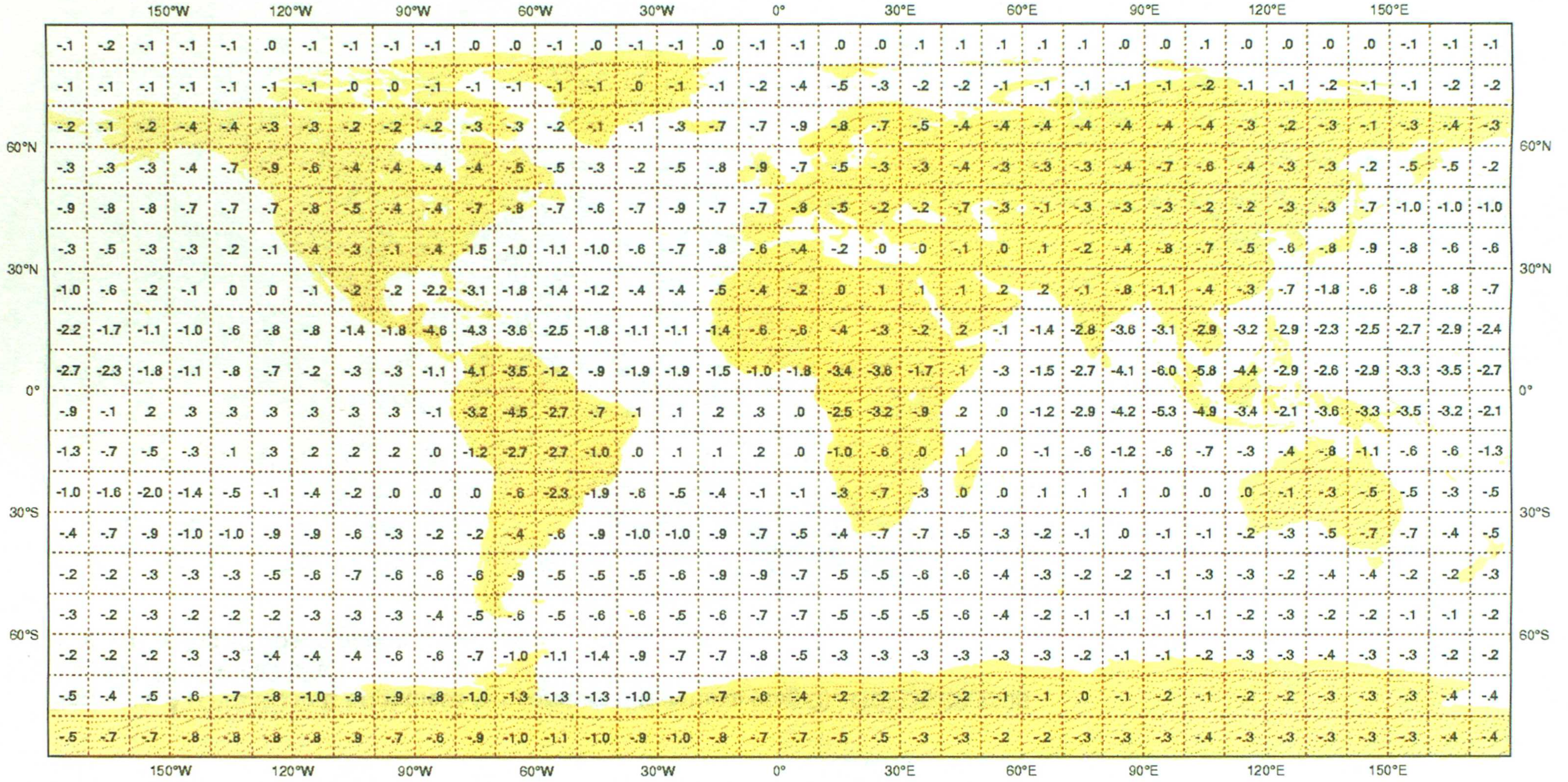
-3.7	-4.0	-3.8	-3.4	-3.3	-3.2	-3.5	-3.7	-3.6	-3.4	-2.8	-3.3	-3.2	-2.9	-2.8	-3.3	-3.7	-4.0	-3.6	-3.3	-3.1	-2.9	-3.0	-3.2	-3.1	-3.2	-3.5	-3.5	-3.2	-3.3	-3.3	-3.3	-3.6	-3.7	-4.1	-3.9
-2.7	-2.5	-2.7	-2.7	-2.5	-3.0	-3.3	-2.8	-3.0	-3.5	-3.6	-3.3	-3.1	-2.7	-2.3	-2.2	-3.4	-3.8	-4.8	-5.0	-4.4	-4.0	-3.9	-3.6	-3.6	-3.5	-3.7	-3.7	-4.0	-3.4	-3.3	-3.5	-3.3	-3.2	-3.4	-3.5
-3.4	-2.7	-3.8	-4.5	-4.8	-4.1	-3.9	-3.2	-3.1	-3.5	-4.0	-4.0	-3.0	-2.4	-3.0	-4.3	-5.8	-5.0	-5.5	-5.3	-4.9	-4.0	-3.0	-3.1	-3.5	-3.8	-4.5	-4.9	-4.2	-3.7	-3.4	-3.6	-2.5	-3.5	-4.6	-4.2
-3.3	-3.1	-3.6	-4.1	-5.9	-6.7	-4.4	-3.2	-3.5	-3.1	-3.1	-4.0	-3.6	-2.9	-2.9	-4.1	-5.1	-5.0	-3.7	-2.3	-1.9	-1.7	-2.0	-1.9	-1.8	-1.8	-3.1	-4.7	-4.5	-3.7	-3.5	-3.6	-2.8	-4.7	-4.2	-2.7
-4.3	-4.0	-3.9	-3.7	-3.7	-3.8	-4.4	-3.3	-2.2	-2.4	-3.6	-3.8	-3.1	-2.7	-3.7	-4.6	-3.4	-3.8	-3.8	-3.0	-1.6	-2.0	-4.2	-1.6	-.5	-1.9	-2.0	-1.7	-1.1	-.9	-1.7	-1.5	-3.7	-5.0	-4.4	-4.7
-1.4	-2.0	-1.0	-1.1	-.8	-.6	-2.9	-2.2	-1.0	-1.9	-4.7	-3.8	-3.8	-3.3	-2.0	-2.8	-3.7	-3.1	-2.5	-1.7	-.3	-.6	-1.1	-1.1	.1	-1.1	-1.3	-3.3	-2.9	-1.9	-2.6	-3.2	-3.6	-3.1	-2.4	-2.3
-3.7	-2.4	-.7	.0	.2	.3	-.1	-1.2	-.7	-6.1	-8.0	-5.6	-4.2	-3.2	-1.3	-1.6	-2.2	-2.3	-2.0	-1.0	.3	.9	-1.4	-.5	.1	.1	-.5	-2.8	-.4	-.8	-2.2	-4.6	-2.4	-2.7	-2.9	-2.7
-6.5	-4.8	-2.9	-2.9	-1.6	-1.9	-1.9	-3.5	-4.6	-11.3	-11.0	-9.0	-6.5	-4.9	-3.0	-3.2	-5.1	-3.7	-2.2	-1.9	.4	2.4	.1	-.6	-3.2	-6.7	-8.7	-7.9	-6.9	-7.6	-7.2	-5.7	-6.9	-7.4	-8.2	-6.6
-7.8	-6.6	-5.2	-3.1	-2.6	-2.1	-.5	-1.0	-.9	-3.6	-11.9	-9.9	-3.4	-2.2	-5.1	-5.5	-4.6	-3.4	-5.9	-8.7	-9.2	-3.4	1.7	-.7	-3.9	-7.6	-11.1	-16.2	-14.7	-11.5	-7.3	-6.3	-7.5	-8.6	-9.2	-7.6
-2.9	-.8	.4	.6	.5	.6	.4	.5	.4	-.9	-9.6	-12.3	-7.4	-3.5	-.5	.4	.3	.5	-.5	-6.7	-9.6	-3.7	.1	-.3	-3.8	-8.4	-11.4	-14.1	-12.6	-7.9	-5.0	-9.3	-8.5	-8.8	-8.5	-6.0
-4.0	-2.1	-1.3	-.4	.6	1.0	.6	.5	.4	-.2	-3.7	-7.8	-8.4	-4.2	-.2	.3	.1	.2	-.5	-4.5	-2.8	-.1	.3	-.1	-.4	-1.7	-3.6	-1.6	-1.4	-.5	-1.0	-1.6	-3.2	-1.6	-1.9	-3.7
-4.0	-5.7	-6.8	-4.6	-1.6	-.3	-1.3	-.8	-.3	.2	.4	-.7	-6.7	-6.4	-1.6	-1.7	-1.5	-.6	-.6	-1.1	-2.6	-1.1	.2	.0	.2	.3	-.1	-.3	.0	.5	-.8	-1.8	-2.4	-2.6	-1.7	-2.2
-2.3	-3.4	-3.9	-4.3	-4.6	-4.0	-4.5	-3.3	-1.8	-1.2	-1.3	-1.6	-2.2	-3.9	-4.5	-4.7	-4.6	-3.6	-2.4	-1.5	-2.8	-3.1	-2.2	-1.6	-1.5	-.9	-.5	-.6	-.6	-.7	-1.5	-2.5	-3.9	-4.1	-2.9	-2.9
-2.2	-1.7	-1.6	-2.0	-2.0	-3.4	-4.3	-4.7	-4.0	-4.1	-4.2	-5.3	-3.3	-3.5	-3.6	-4.6	-5.7	-5.7	-4.7	-3.6	-3.7	-3.6	-3.5	-2.9	-2.6	-2.4	-2.9	-1.9	-2.5	-2.4	-1.8	-2.8	-2.8	-2.1	-2.4	-3.0
-3.3	-3.0	-3.0	-2.8	-3.0	-3.3	-3.5	-3.4	-3.5	-3.7	-4.3	-4.6	-4.0	-3.9	-4.5	-4.6	-5.8	-6.1	-5.4	-5.1	-5.2	-5.2	-5.4	-5.0	-4.2	-3.8	-3.6	-3.6	-3.7	-3.8	-3.8	-3.4	-3.0	-2.4	-2.5	-3.1
-4.2	-4.1	-3.8	-4.0	-3.9	-5.1	-5.2	-5.3	-5.9	-5.9	-6.4	-7.5	-7.2	-8.3	-6.2	-5.6	-5.5	-5.7	-4.8	-4.6	-5.1	-5.5	-5.3	-4.8	-4.8	-4.1	-3.9	-3.5	-3.9	-4.4	-5.0	-4.9	-4.2	-4.3	-4.0	-4.1
-4.7	-5.1	-5.4	-6.1	-6.3	-6.7	-8.1	-7.6	-8.0	-6.4	-7.4	-7.7	-7.8	-7.6	-6.7	-5.4	-5.0	-4.0	-3.1	-3.3	-3.5	-3.1	-2.6	-2.0	-1.7	-2.1	-2.8	-3.2	-3.1	-3.2	-3.3	-2.9	-3.0	-2.6	-2.8	-4.1
-5.5	-6.5	-6.4	-6.3	-6.0	-6.2	-6.3	-6.5	-5.0	-3.8	-5.5	-6.2	-6.0	-5.4	-4.9	-5.0	-4.6	-4.4	-4.4	-3.9	-3.2	-2.6	-2.6	-2.4	-2.4	-2.4	-3.1	-3.5	-3.9	-3.7	-3.7	-3.8	-3.9	-3.5	-5.1	-5.4

Figure 46. ATOVS SD O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS11 (500 - 700 hPa)
NOAA16, using all observations



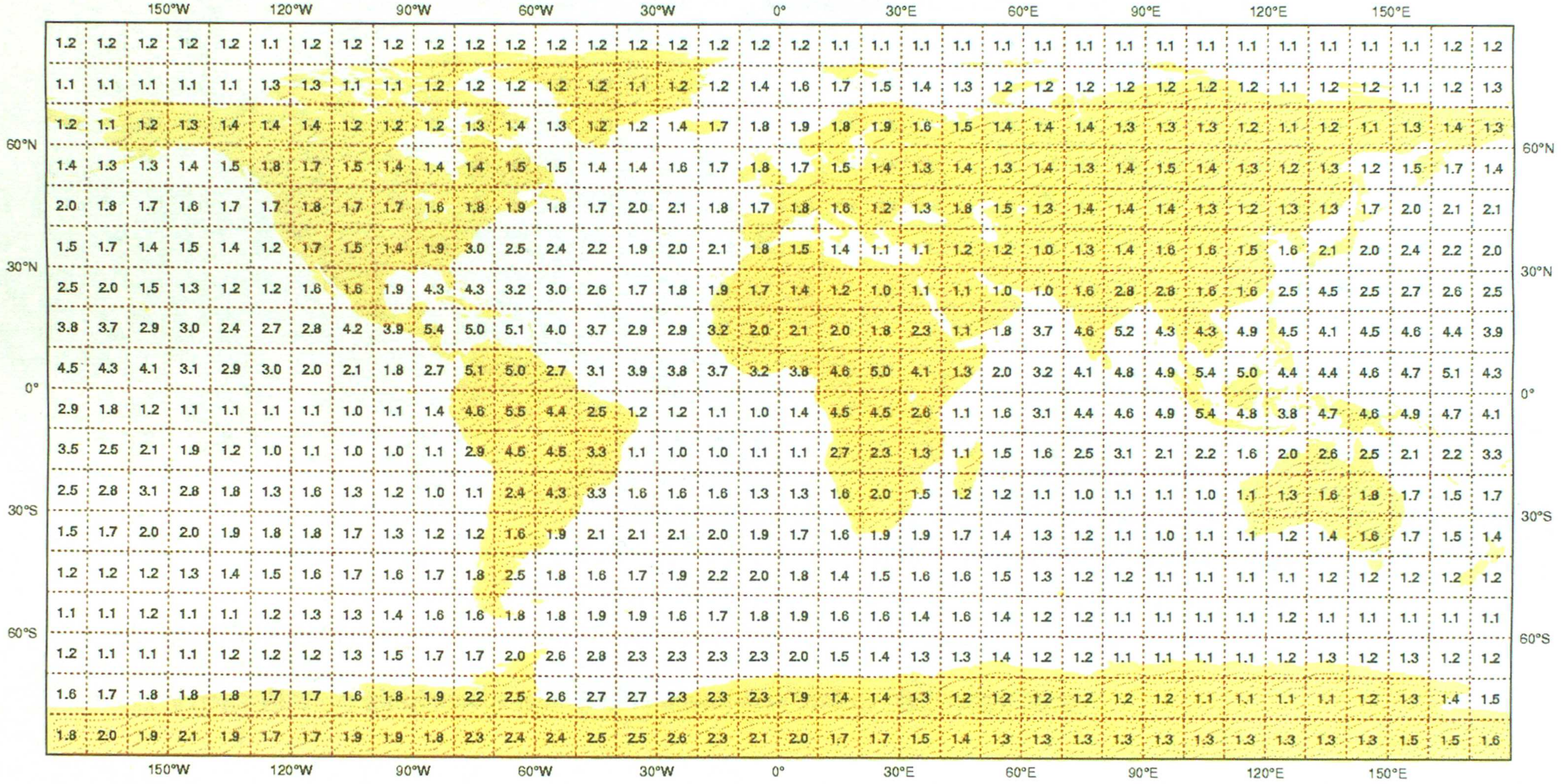
3.7	3.6	3.6	3.4	3.1	3.1	3.5	3.4	3.3	4.1	3.8	3.7	3.8	3.4	3.9	3.8	3.7	4.0	3.5	3.0	2.8	2.8	2.7	2.7	2.7	2.7	2.8	3.1	2.6	2.7	3.0	3.0	3.1	3.5	3.8	3.7
3.4	3.7	3.9	3.5	3.3	4.6	4.9	3.3	3.1	3.9	3.8	3.8	4.1	3.4	2.9	4.3	4.3	5.0	6.0	6.5	5.8	5.0	4.5	4.3	4.2	4.0	4.1	4.3	4.2	3.4	3.1	3.4	3.6	3.2	4.0	4.7
5.1	4.3	5.2	5.8	6.4	5.9	6.0	4.5	4.3	4.5	4.7	5.2	4.9	4.2	4.8	5.9	7.0	6.8	7.2	7.0	7.2	6.4	6.0	5.8	5.8	5.4	5.0	5.1	4.7	4.0	3.8	4.4	3.6	5.1	5.8	5.5
5.7	5.2	5.9	6.4	7.5	7.5	6.9	5.7	5.3	4.8	5.2	5.7	5.7	5.5	5.7	6.8	7.0	7.1	6.6	5.4	4.8	5.1	5.4	5.1	5.6	5.2	5.6	6.2	5.7	5.4	5.4	5.3	5.4	6.8	6.9	5.7
7.2	6.8	6.7	6.5	7.0	6.5	6.6	6.2	5.8	5.4	6.4	6.9	6.6	6.4	7.5	8.3	6.7	6.5	6.6	6.0	3.7	5.6	7.7	6.2	5.0	5.8	5.8	5.9	4.9	4.4	5.3	5.2	7.1	8.0	7.6	7.7
4.9	6.0	4.5	4.5	4.0	3.5	6.3	5.5	4.2	5.9	9.0	8.0	7.6	7.1	6.7	7.1	7.8	6.5	5.7	5.1	2.9	3.3	4.1	3.7	2.8	5.7	6.2	6.5	5.9	5.3	5.7	6.7	7.5	7.9	7.3	6.3
8.2	6.5	4.4	3.4	2.8	3.1	3.9	4.3	5.2	11.6	11.9	9.8	9.0	7.5	5.6	5.7	5.9	5.5	4.5	3.1	2.2	3.6	2.5	1.9	1.9	4.1	8.5	8.1	4.5	4.2	6.4	11.7	7.6	7.7	8.2	7.8
11.2	10.2	8.3	8.9	7.1	7.9	8.1	10.6	10.6	14.4	13.9	13.6	11.5	10.7	8.5	8.3	9.4	5.8	5.8	5.5	5.5	7.3	2.5	4.6	9.4	12.5	13.7	11.3	11.3	12.9	12.1	10.8	12.4	12.4	12.5	11.1
12.7	12.4	11.9	9.4	8.5	8.8	5.6	5.8	4.5	7.5	14.0	13.6	7.6	9.0	11.8	11.4	11.0	9.3	11.3	12.6	13.9	11.9	4.0	5.2	9.1	11.2	12.9	13.1	14.2	13.2	12.0	11.7	12.3	12.7	13.6	11.9
8.3	4.8	2.6	1.8	1.6	1.8	1.9	1.3	1.5	3.5	12.9	14.9	12.4	7.0	2.5	2.2	1.9	1.4	3.5	12.3	13.1	7.1	1.9	4.2	9.2	12.5	12.5	13.3	14.2	12.8	10.2	12.4	12.2	13.2	12.9	11.2
10.4	8.0	6.7	5.3	2.8	1.6	1.8	1.2	1.4	2.0	8.5	12.7	13.3	8.8	2.3	1.6	1.7	1.5	2.3	8.1	7.1	3.1	2.7	4.0	4.2	7.0	8.6	5.1	5.1	3.6	4.8	7.3	6.9	5.9	6.3	9.3
8.5	9.9	10.5	9.1	6.3	3.8	5.6	4.2	2.8	1.7	2.5	7.7	13.5	9.9	5.2	5.1	5.0	3.8	3.8	5.6	7.5	5.1	3.5	2.9	2.2	1.8	2.2	2.6	1.9	2.6	4.0	6.2	6.9	6.8	5.1	5.8
5.8	6.8	7.9	7.9	7.8	6.9	6.9	6.5	4.8	4.1	4.5	6.6	7.3	8.1	8.0	8.2	8.0	7.4	6.3	5.5	7.4	7.5	6.6	5.3	5.2	3.8	2.9	2.9	3.2	3.7	4.9	6.1	6.7	7.5	6.2	5.8
4.7	4.3	4.5	5.2	5.3	6.1	6.5	7.1	6.5	6.6	6.9	9.6	6.7	6.6	6.8	7.4	8.4	8.1	7.5	5.9	6.3	6.5	6.2	5.9	5.4	4.5	5.0	4.2	4.6	4.6	4.2	5.2	5.4	4.8	5.4	6.0
4.5	4.3	4.4	4.3	4.8	5.1	5.5	5.7	5.7	6.3	6.7	7.4	7.1	6.9	6.8	6.2	7.0	7.2	6.8	6.5	6.4	5.9	6.2	5.9	5.1	4.5	4.2	4.3	4.7	4.9	5.0	4.8	4.9	3.9	4.1	4.6
4.7	4.4	4.0	4.4	4.3	5.1	5.2	5.5	6.3	6.5	6.7	8.6	9.9	10.5	7.9	7.1	6.5	6.8	5.8	4.8	4.6	4.9	5.1	5.6	5.1	4.3	4.3	4.4	4.8	4.9	5.4	5.6	5.3	5.4	4.6	4.9
5.6	5.9	6.4	7.5	7.4	6.8	6.7	7.2	7.9	7.4	8.6	9.4	9.3	8.9	8.3	7.8	8.0	6.9	5.2	4.0	4.7	4.7	3.7	3.1	3.1	3.3	3.3	3.6	3.1	3.0	3.0	3.1	3.8	3.8	5.6	5.1
6.3	7.1	7.5	8.4	7.5	6.4	6.7	7.5	6.8	6.2	7.7	7.9	7.6	8.0	7.9	8.3	6.8	5.6	5.3	4.3	4.1	3.4	3.3	3.3	3.4	3.8	3.9	4.2	4.4	4.1	4.2	4.4	4.5	5.9	5.9	5.9

Figure 47. ATOVS MEAN O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS4 (400 hPa)
NOAA16, using all observations



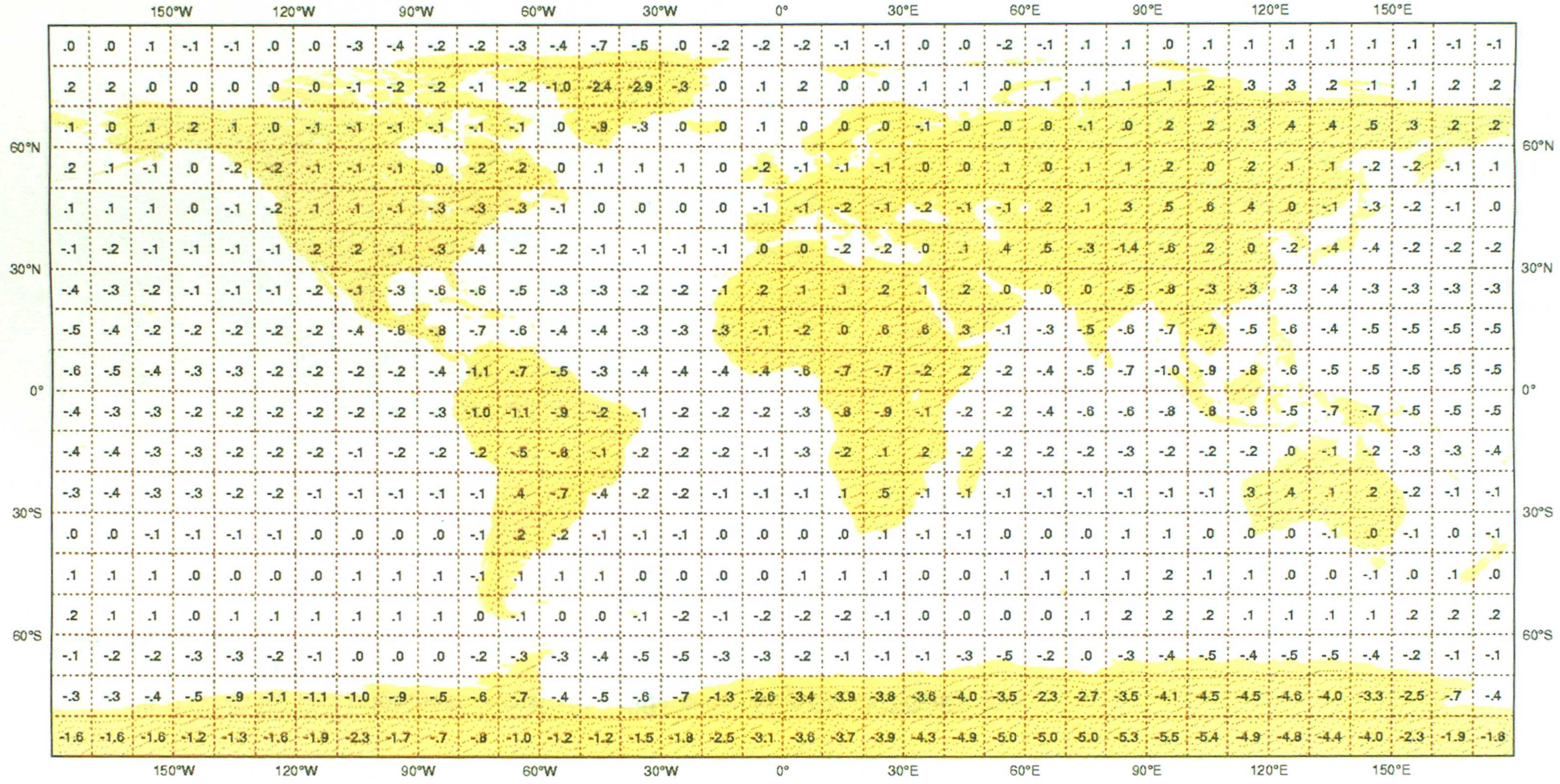
-.1	-.2	-.1	-.1	-.1	.0	-.1	-.1	-.1	-.1	.0	.0	-.1	.0	-.1	-.1	.0	-.1	-.1	.0	.0	.1	.1	.1	.1	.1	.0	.0	.1	.0	.0	.0	.0	-.1	-.1	-.1
-.1	-.1	-.1	-.1	-.1	-.1	-.1	.0	.0	-.1	-.1	-.1	-.1	-.1	.0	-.1	-.1	-.2	-.4	-.5	-.3	-.2	-.2	-.1	-.1	-.1	-.1	-.1	-.2	-.1	-.1	-.2	-.1	-.1	-.2	-.2
-.2	-.1	-.2	-.4	-.4	-.3	-.3	-.2	-.2	-.2	-.3	-.3	-.2	-.1	-.1	-.3	-.7	-.7	-.9	-.8	-.7	-.5	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.2	-.3	-.1	-.3	-.4	-.3
-.3	-.3	-.3	-.4	-.7	-.9	-.6	-.4	-.4	-.4	-.4	-.5	-.5	-.3	-.2	-.5	-.8	-.9	-.7	-.5	-.3	-.3	-.4	-.3	-.3	-.3	-.4	-.7	-.6	-.4	-.3	-.3	-.2	-.5	-.5	-.2
-.9	-.8	-.8	-.7	-.7	-.7	-.8	-.5	-.4	-.4	-.7	-.8	-.7	-.6	-.7	-.9	-.7	-.7	-.8	-.5	-.2	-.2	-.7	-.3	-.1	-.3	-.3	-.3	-.2	-.2	-.3	-.3	-.7	-1.0	-1.0	-1.0
-.3	-.5	-.3	-.3	-.2	-.1	-.4	-.3	-.1	-.4	-1.5	-1.0	-1.1	-1.0	-.6	-.7	-.8	-.6	-.4	-.2	.0	.0	-.1	.0	.1	-.2	-.4	-.8	-.7	-.5	-.6	-.8	-.9	-.8	-.6	-.6
-1.0	-.6	-.2	-.1	.0	.0	-.1	-.2	-.2	-2.2	-3.1	-1.8	-1.4	-1.2	-.4	-.4	-.5	-.4	-.2	.0	.1	.1	.1	.2	.2	-.1	-.8	-1.1	-.4	-.3	-.7	-1.8	-.6	-.8	-.8	-.7
-2.2	-1.7	-1.1	-1.0	-.6	-.8	-.8	-1.4	-1.8	-4.6	-4.3	-3.6	-2.5	-1.8	-1.1	-1.1	-1.4	-.6	-.6	-.4	-.3	-.2	.2	-.1	-1.4	-2.8	-3.6	-3.1	-2.9	-3.2	-2.9	-2.3	-2.5	-2.7	-2.9	-2.4
-2.7	-2.3	-1.8	-1.1	-.8	-.7	-.2	-.3	-.3	-1.1	-4.1	-3.5	-1.2	-.9	-1.9	-1.9	-1.5	-1.0	-1.8	-3.4	-3.6	-1.7	.1	-.3	-1.5	-2.7	-4.1	-6.0	-5.8	-4.4	-2.9	-2.6	-2.9	-3.3	-3.5	-2.7
-.9	-.1	.2	.3	.3	.3	.3	.3	.3	-.1	-3.2	-4.5	-2.7	-.7	.1	.1	.2	.3	.0	-2.5	-3.2	-.9	.2	.0	-1.2	-2.9	-4.2	-5.3	-4.9	-3.4	-2.1	-3.6	-3.3	-3.5	-3.2	-2.1
-1.3	-.7	-.5	-.3	.1	.3	.2	.2	.2	.0	-1.2	-2.7	-2.7	-1.0	.0	.1	.1	.2	.0	-1.0	-.6	.0	.1	.0	-.1	-.6	-1.2	-.6	-.7	-.3	-.4	-.8	-1.1	-.6	-.6	-1.3
-1.0	-1.6	-2.0	-1.4	-.5	-.1	-.4	-.2	.0	.0	.0	-.6	-2.3	-1.9	-.6	-.5	-.4	-.1	-.1	-.3	-.7	-.3	.0	.0	.1	.1	.1	.0	.0	.0	-.1	-.3	-.5	-.5	-.3	-.5
-.4	-.7	-.9	-1.0	-1.0	-.9	-.9	-.6	-.3	-.2	-.2	-.4	-.6	-.9	-1.0	-1.0	-.9	-.7	-.5	-.4	-.7	-.7	-.5	-.3	-.2	-.1	.0	-.1	-.1	-.2	-.3	-.5	-.7	-.7	-.4	-.5
-.2	-.2	-.3	-.3	-.3	-.5	-.6	-.7	-.6	-.6	-.6	-.9	-.5	-.5	-.5	-.6	-.9	-.9	-.7	-.5	-.5	-.6	-.6	-.4	-.3	-.2	-.2	-.1	-.3	-.3	-.2	-.4	-.4	-.2	-.2	-.3
-.3	-.2	-.3	-.2	-.2	-.2	-.3	-.3	-.3	-.4	-.5	-.6	-.5	-.6	-.6	-.5	-.6	-.7	-.7	-.5	-.5	-.5	-.6	-.4	-.2	-.1	-.1	-.1	-.1	-.2	-.3	-.2	-.2	-.1	-.1	-.2
-.2	-.2	-.2	-.3	-.3	-.4	-.4	-.4	-.6	-.6	-.7	-1.0	-1.1	-1.4	-.9	-.7	-.7	-.8	-.5	-.3	-.3	-.3	-.3	-.3	-.3	-.2	-.1	-.1	-.2	-.3	-.3	-.4	-.3	-.3	-.2	-.2
-.5	-.4	-.5	-.6	-.7	-.8	-1.0	-.8	-.9	-.8	-1.0	-1.3	-1.3	-1.3	-1.0	-.7	-.7	-.6	-.4	-.2	-.2	-.2	-.2	-.1	-.1	.0	-.1	-.2	-.1	-.2	-.2	-.3	-.3	-.3	-.4	-.4
-.5	-.7	-.7	-.8	-.8	-.8	-.8	-.9	-.7	-.6	-.9	-1.0	-1.1	-1.0	-.9	-1.0	-.8	-.7	-.7	-.5	-.5	-.3	-.3	-.2	-.2	-.3	-.3	-.3	-.4	-.3	-.3	-.3	-.3	-.3	-.4	-.4

Figure 48. ATOVS SD O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: HIRS4 (400 hPa)
NOAA16, using all observations



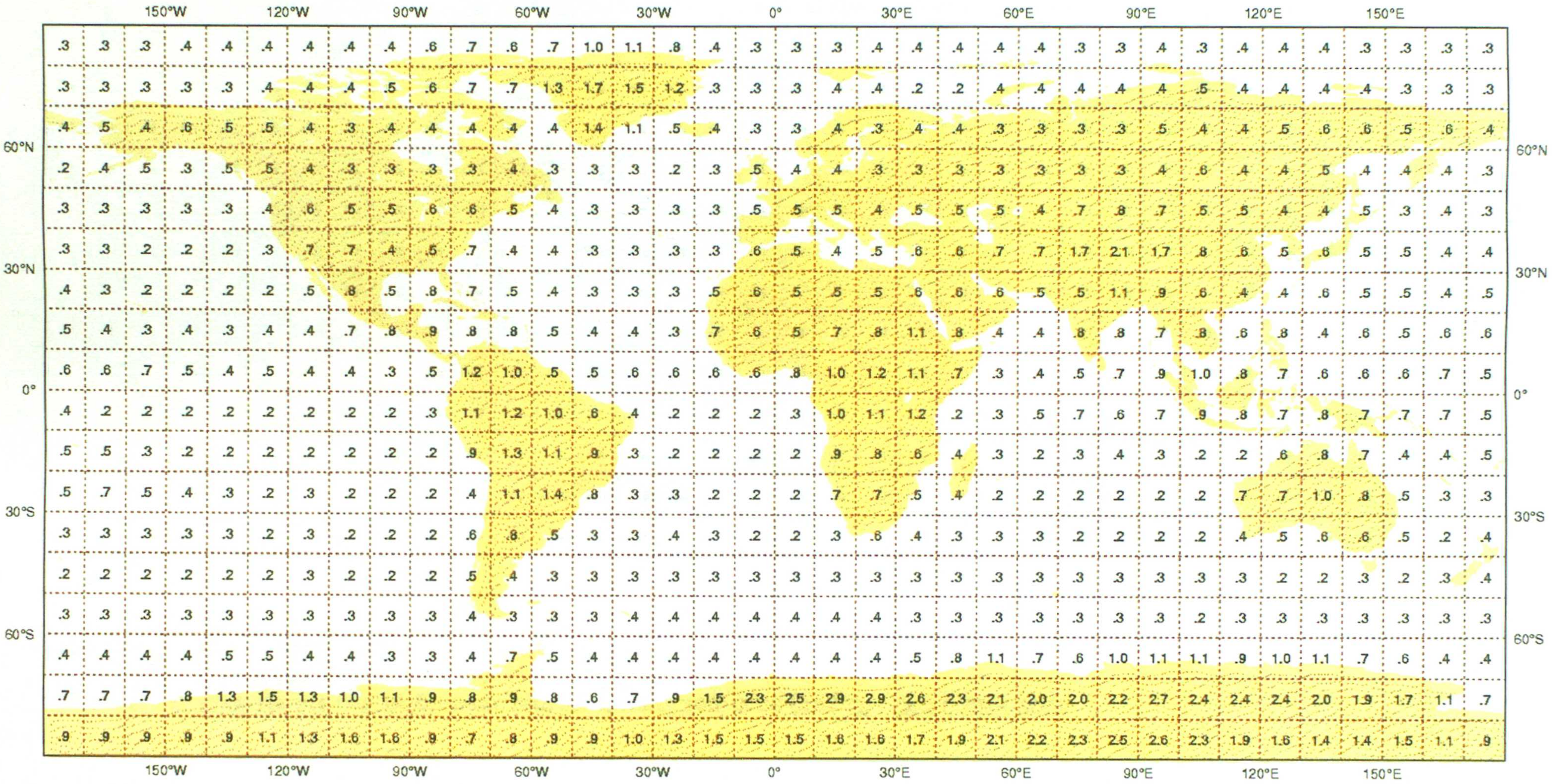
1.2	1.2	1.2	1.2	1.2	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2
1.1	1.1	1.1	1.1	1.1	1.3	1.3	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.1	1.2	1.2	1.4	1.6	1.7	1.5	1.4	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.2	1.2	1.1	1.2	1.3
1.2	1.1	1.2	1.3	1.4	1.4	1.4	1.2	1.2	1.2	1.3	1.4	1.3	1.2	1.2	1.4	1.7	1.8	1.9	1.8	1.9	1.6	1.5	1.4	1.4	1.4	1.3	1.3	1.3	1.2	1.1	1.2	1.1	1.3	1.4	1.3
1.4	1.3	1.3	1.4	1.5	1.8	1.7	1.5	1.4	1.4	1.4	1.5	1.5	1.4	1.4	1.6	1.7	1.8	1.7	1.5	1.4	1.3	1.4	1.3	1.4	1.3	1.4	1.5	1.4	1.3	1.2	1.3	1.2	1.5	1.7	1.4
2.0	1.8	1.7	1.6	1.7	1.7	1.8	1.7	1.7	1.6	1.8	1.9	1.8	1.7	2.0	2.1	1.8	1.7	1.8	1.6	1.2	1.3	1.8	1.5	1.3	1.4	1.4	1.4	1.3	1.2	1.3	1.3	1.7	2.0	2.1	2.1
1.5	1.7	1.4	1.5	1.4	1.2	1.7	1.5	1.4	1.9	3.0	2.5	2.4	2.2	1.9	2.0	2.1	1.8	1.5	1.4	1.1	1.1	1.2	1.2	1.0	1.3	1.4	1.6	1.6	1.5	1.6	2.1	2.0	2.4	2.2	2.0
2.5	2.0	1.5	1.3	1.2	1.2	1.6	1.6	1.9	4.3	4.3	3.2	3.0	2.6	1.7	1.8	1.9	1.7	1.4	1.2	1.0	1.1	1.1	1.0	1.0	1.6	2.8	2.8	1.6	1.6	2.5	4.5	2.5	2.7	2.6	2.5
3.8	3.7	2.9	3.0	2.4	2.7	2.8	4.2	3.9	5.4	5.0	5.1	4.0	3.7	2.9	2.9	3.2	2.0	2.1	2.0	1.8	2.3	1.1	1.8	3.7	4.6	5.2	4.3	4.3	4.9	4.5	4.1	4.5	4.6	4.4	3.9
4.5	4.3	4.1	3.1	2.9	3.0	2.0	2.1	1.8	2.7	5.1	5.0	2.7	3.1	3.9	3.8	3.7	3.2	3.8	4.6	5.0	4.1	1.3	2.0	3.2	4.1	4.8	4.9	5.4	5.0	4.4	4.4	4.6	4.7	5.1	4.3
2.9	1.8	1.2	1.1	1.1	1.1	1.1	1.0	1.1	1.4	4.6	5.5	4.4	2.5	1.2	1.2	1.1	1.0	1.4	4.5	4.5	2.6	1.1	1.6	3.1	4.4	4.6	4.9	5.4	4.8	3.8	4.7	4.6	4.9	4.7	4.1
3.5	2.5	2.1	1.9	1.2	1.0	1.1	1.0	1.0	1.1	2.9	4.5	4.5	3.3	1.1	1.0	1.0	1.1	1.1	2.7	2.3	1.3	1.1	1.5	1.6	2.5	3.1	2.1	2.2	1.6	2.0	2.6	2.5	2.1	2.2	3.3
2.5	2.8	3.1	2.8	1.8	1.3	1.6	1.3	1.2	1.0	1.1	2.4	4.3	3.3	1.6	1.6	1.6	1.3	1.3	1.6	2.0	1.5	1.2	1.2	1.1	1.0	1.1	1.1	1.0	1.1	1.3	1.6	1.8	1.7	1.5	1.7
1.5	1.7	2.0	2.0	1.9	1.8	1.8	1.7	1.3	1.2	1.2	1.6	1.9	2.1	2.1	2.1	2.0	1.9	1.7	1.6	1.9	1.9	1.7	1.4	1.3	1.2	1.1	1.0	1.1	1.1	1.2	1.4	1.6	1.7	1.5	1.4
1.2	1.2	1.2	1.3	1.4	1.5	1.6	1.7	1.6	1.7	1.8	2.5	1.8	1.6	1.7	1.9	2.2	2.0	1.8	1.4	1.5	1.6	1.6	1.5	1.3	1.2	1.2	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2
1.1	1.1	1.2	1.1	1.1	1.2	1.3	1.3	1.4	1.6	1.6	1.8	1.8	1.9	1.9	1.6	1.7	1.8	1.9	1.6	1.6	1.4	1.6	1.4	1.2	1.2	1.1	1.1	1.1	1.1	1.2	1.1	1.1	1.1	1.1	1.1
1.2	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.5	1.7	1.7	2.0	2.6	2.8	2.3	2.3	2.3	2.3	2.0	1.5	1.4	1.3	1.3	1.4	1.2	1.2	1.1	1.1	1.1	1.1	1.2	1.3	1.2	1.3	1.2	1.2
1.6	1.7	1.8	1.8	1.8	1.7	1.7	1.6	1.8	1.9	2.2	2.5	2.6	2.7	2.7	2.3	2.3	2.3	1.9	1.4	1.4	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.2	1.3	1.4	1.5
1.8	2.0	1.9	2.1	1.9	1.7	1.7	1.9	1.9	1.8	2.3	2.4	2.4	2.5	2.5	2.6	2.3	2.1	2.0	1.7	1.7	1.5	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.5	1.5	1.6

Figure 49. ATOVS MEAN O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: AMSUA-5 (700 hPa)
NOAA16, using all observations



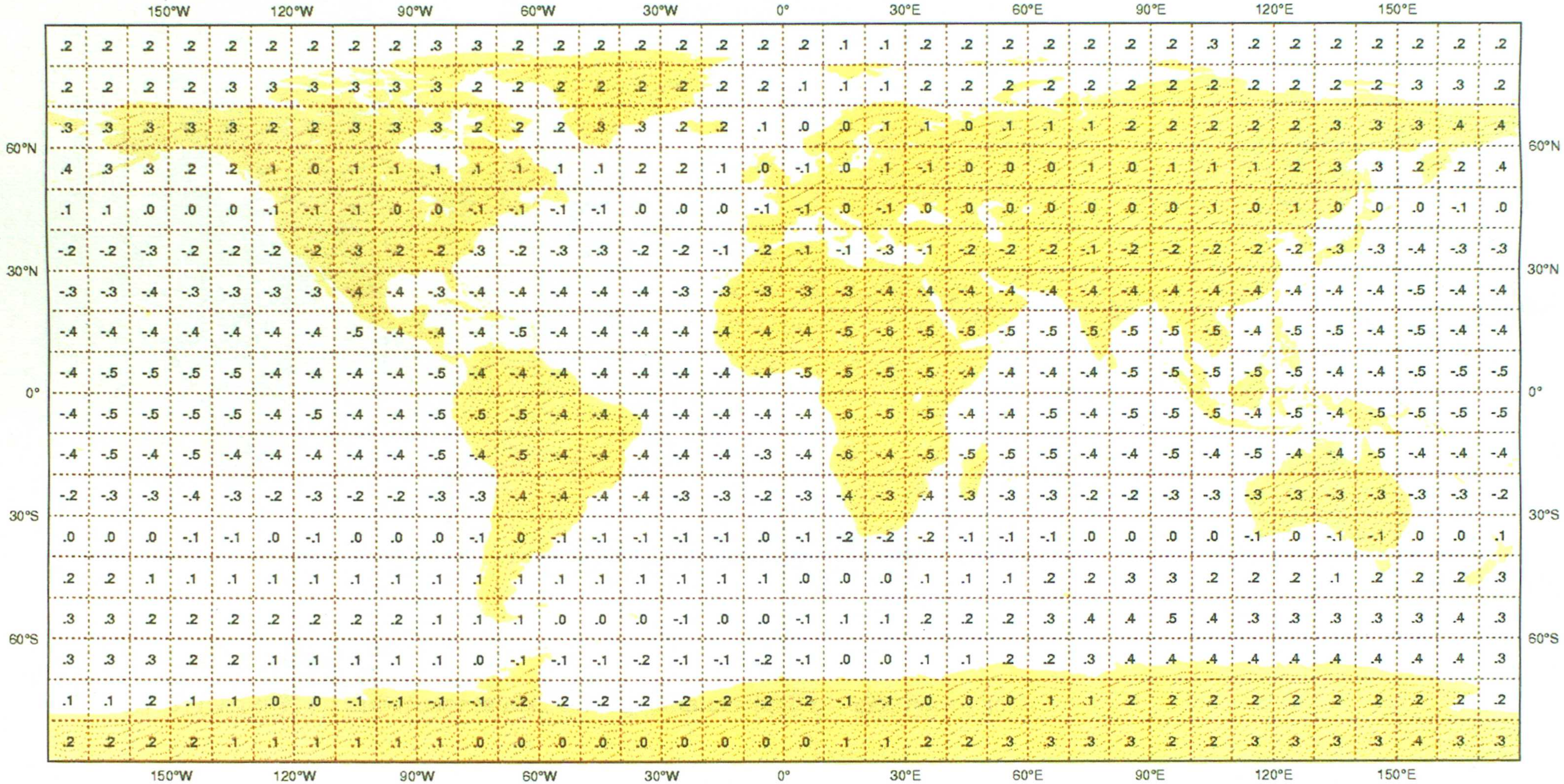
.0	.0	.1	-.1	-.1	.0	.0	-.3	-.4	-.2	-.2	-.3	-.4	-.7	-.5	.0	-.2	-.2	-.2	-.1	-.1	.0	.0	-.2	-.1	.1	.1	.0	.1	.1	.1	.1	.1	.1	-.1	-.1
.2	.2	.0	.0	.0	.0	.0	-.1	-.2	-.2	-.1	-.2	-1.0	-2.4	-2.9	-.3	.0	.1	.2	.0	.0	.1	.1	.0	.1	.1	.1	.1	.2	.3	.3	.2	.1	.1	.2	.2
.1	.0	.1	.2	.1	.0	-.1	-.1	-.1	-.1	-.1	-.1	.0	-.9	-.3	.0	.0	.1	.0	.0	.0	-.1	.0	.0	.0	-.1	.0	.2	.2	.3	.4	.4	.5	.3	.2	.2
.2	.1	-.1	.0	-.2	-.2	-.1	-.1	-.1	.0	-.2	-.2	.0	.1	.1	.1	.0	-.2	-.1	-.1	-.1	.0	.0	.1	.0	.1	.1	.2	.0	.2	.1	.1	-.2	-.2	-.1	.1
.1	.1	.1	.0	-.1	-.2	.1	.1	-.1	-.3	-.3	-.3	-.1	.0	.0	.0	.0	-.1	-.1	-.2	-.1	-.2	-.1	-.1	.2	.1	.3	.5	.6	.4	.0	-.1	-.3	-.2	-.1	.0
-.1	-.2	-.1	-.1	-.1	-.1	.2	.2	-.1	-.3	-.4	-.2	-.2	-.1	-.1	-.1	-.1	.0	.0	-.2	-.2	.0	.1	.4	.5	-.3	-1.4	-.6	.2	.0	-.2	-.4	-.4	-.2	-.2	-.2
-.4	-.3	-.2	-.1	-.1	-.1	-.2	-.1	-.3	-.6	-.6	-.5	-.3	-.3	-.2	-.2	-.1	.2	.1	.1	.2	.1	.2	.0	.0	.0	-.5	-.8	-.3	-.3	-.3	-.4	-.3	-.3	-.3	-.3
-.5	-.4	-.2	-.2	-.2	-.2	-.2	-.4	-.6	-.8	-.7	-.6	-.4	-.4	-.3	-.3	-.3	-.1	-.2	.0	.6	.6	.3	-.1	-.3	-.5	-.6	-.7	-.7	-.5	-.6	-.4	-.5	-.5	-.5	-.5
-.6	-.5	-.4	-.3	-.3	-.2	-.2	-.2	-.2	-.4	-1.1	-.7	-.5	-.3	-.4	-.4	-.4	-.4	-.6	-.7	-.7	-.2	.2	-.2	-.4	-.5	-.7	-1.0	-.9	-.8	-.6	-.5	-.5	-.5	-.5	-.5
-.4	-.3	-.3	-.2	-.2	-.2	-.2	-.2	-.2	-.3	-1.0	-1.1	-.9	-.2	-.1	-.2	-.2	-.2	-.3	-.8	-.9	-.1	-.2	-.2	-.4	-.6	-.6	-.8	-.8	-.6	-.5	-.7	-.7	-.5	-.5	-.5
-.4	-.4	-.3	-.3	-.2	-.2	-.2	-.1	-.2	-.2	-.2	-.5	-.8	-.1	-.2	-.2	-.2	-.1	-.3	-.2	.1	.2	-.2	-.2	-.2	-.2	-.3	-.2	-.2	-.2	.0	-.1	-.2	-.3	-.3	-.4
-.3	-.4	-.3	-.3	-.2	-.2	-.1	-.1	-.1	-.1	-.1	.4	-.7	-.4	-.2	-.2	-.1	-.1	-.1	.1	.5	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	.3	.4	.1	.2	-.2	-.1	-.1
.0	.0	-.1	-.1	-.1	-.1	.0	.0	.0	.0	-.1	.2	-.2	-.1	-.1	-.1	.0	.0	.0	.0	.1	-.1	-.1	.0	.0	.0	.1	.1	.0	.0	.0	-.1	.0	-.1	.0	-.1
.1	.1	.1	.0	.0	.0	.0	.1	.1	.1	-.1	.1	.1	.1	.0	.0	.0	.0	.1	.1	.1	.0	.0	.1	.1	.1	.1	.2	.1	.1	.0	.0	-.1	.0	.1	.0
.2	.1	.1	.0	.1	.1	.1	.1	.1	.1	.0	-.1	.0	.0	-.1	-.2	-.1	-.2	-.2	-.2	-.1	.0	.0	.0	.0	.1	.2	.2	.2	.1	.1	.1	.1	.2	.2	.2
-.1	-.2	-.2	-.3	-.3	-.2	-.1	.0	.0	.0	-.2	-.3	-.3	-.4	-.5	-.5	-.3	-.3	-.2	-.1	-.1	-.1	-.3	-.5	-.2	.0	-.3	-.4	-.5	-.4	-.5	-.5	-.4	-.2	-.1	-.1
-.3	-.3	-.4	-.5	-.9	-1.1	-1.1	-1.0	-.9	-.5	-.6	-.7	-.4	-.5	-.6	-.7	-1.3	-2.6	-3.4	-3.9	-3.8	-3.6	-4.0	-3.5	-2.3	-2.7	-3.5	-4.1	-4.5	-4.5	-4.6	-4.0	-3.3	-2.5	-.7	-.4
-1.6	-1.6	-1.6	-1.2	-1.3	-1.6	-1.9	-2.3	-1.7	-.7	-.8	-1.0	-1.2	-1.2	-1.5	-1.8	-2.5	-3.1	-3.6	-3.7	-3.9	-4.3	-4.9	-5.0	-5.0	-5.0	-5.3	-5.5	-5.4	-4.9	-4.8	-4.4	-4.0	-2.3	-1.9	-1.8

Figure 50. ATOVS SD O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: AMSUA-5 (700 hPa)
NOAA16, using all observations



.3	.3	.3	.4	.4	.4	.4	.4	.4	.6	.7	.6	.7	1.0	1.1	.8	.4	.3	.3	.3	.4	.4	.4	.4	.4	.3	.3	.4	.3	.4	.4	.4	.3	.3	.3	.3
.3	.3	.3	.3	.3	.4	.4	.4	.5	.6	.7	.7	1.3	1.7	1.5	1.2	.3	.3	.3	.4	.4	.2	.2	.4	.4	.4	.4	.4	.5	.4	.4	.4	.4	.3	.3	.3
.4	.5	.4	.6	.5	.5	.4	.3	.4	.4	.4	.4	.4	1.4	1.1	.5	.4	.3	.3	.4	.3	.4	.4	.3	.3	.3	.3	.5	.4	.4	.5	.6	.6	.5	.6	.4
.2	.4	.5	.3	.5	.5	.4	.3	.3	.3	.3	.4	.3	.3	.3	.2	.3	.5	.4	.4	.3	.3	.3	.3	.3	.3	.3	.4	.6	.4	.4	.5	.4	.4	.4	.3
.3	.3	.3	.3	.3	.4	.6	.5	.5	.6	.6	.5	.4	.3	.3	.3	.3	.5	.5	.5	.4	.5	.5	.5	.4	.7	.8	.7	.5	.5	.4	.4	.5	.3	.4	.3
.3	.3	.2	.2	.2	.3	.7	.7	.4	.5	.7	.4	.4	.3	.3	.3	.3	.6	.5	.4	.5	.6	.6	.7	.7	1.7	2.1	1.7	.8	.6	.5	.6	.5	.5	.4	.4
.4	.3	.2	.2	.2	.2	.5	.8	.5	.8	.7	.5	.4	.3	.3	.3	.5	.6	.5	.5	.5	.6	.6	.6	.5	.5	1.1	.9	.6	.4	.4	.6	.5	.5	.4	.5
.5	.4	.3	.4	.3	.4	.4	.7	.8	.9	.8	.8	.5	.4	.4	.3	.7	.6	.5	.7	.8	1.1	.8	.4	.4	.8	.8	.7	.8	.6	.8	.4	.6	.5	.6	.6
.6	.6	.7	.5	.4	.5	.4	.4	.3	.5	1.2	1.0	.5	.5	.6	.6	.6	.6	.8	1.0	1.2	1.1	.7	.3	.4	.5	.7	.9	1.0	.8	.7	.6	.6	.6	.7	.5
.4	.2	.2	.2	.2	.2	.2	.2	.2	.3	1.1	1.2	1.0	.6	.4	.2	.2	.2	.3	1.0	1.1	1.2	.2	.3	.5	.7	.6	.7	.9	.8	.7	.8	.7	.7	.7	.5
.5	.5	.3	.2	.2	.2	.2	.2	.2	.2	.9	1.3	1.1	.9	.3	.2	.2	.2	.2	.9	.8	.6	.4	.3	.2	.3	.4	.3	.2	.2	.6	.8	.7	.4	.4	.5
.5	.7	.5	.4	.3	.2	.3	.2	.2	.2	.4	1.1	1.4	.8	.3	.3	.2	.2	.2	.7	.7	.5	.4	.2	.2	.2	.2	.2	.2	.7	.7	1.0	.8	.5	.3	.3
.3	.3	.3	.3	.3	.2	.3	.2	.2	.2	.6	.8	.5	.3	.3	.4	.3	.2	.2	.3	.6	.4	.3	.3	.3	.2	.2	.2	.2	.4	.5	.6	.6	.5	.2	.4
.2	.2	.2	.2	.2	.2	.3	.2	.2	.2	.5	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.2	.3	.2	.3	.4
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.2	.3	.3	.3	.3	.3	.3	.3
.4	.4	.4	.4	.5	.5	.4	.4	.3	.3	.4	.7	.5	.4	.4	.4	.4	.4	.4	.4	.4	.5	.8	1.1	.7	.6	1.0	1.1	1.1	.9	1.0	1.1	.7	.6	.4	.4
.7	.7	.7	.8	1.3	1.5	1.3	1.0	1.1	.9	.8	.9	.8	.6	.7	.9	1.5	2.3	2.5	2.9	2.9	2.6	2.3	2.1	2.0	2.0	2.2	2.7	2.4	2.4	2.4	2.0	1.9	1.7	1.1	.7
.9	.9	.9	.9	.9	1.1	1.3	1.6	1.6	.9	.7	.8	.9	.9	1.0	1.3	1.5	1.5	1.5	1.6	1.6	1.7	1.9	2.1	2.2	2.3	2.5	2.6	2.3	1.9	1.6	1.4	1.4	1.5	1.1	.9

Figure 51. ATOVS MEAN O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: AMSUA-7 (300 hPa)
NOAA16, using all observations



.2	.2	.2	.2	.2	.2	.2	.2	.2	.3	.3	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1	.2	.2	.2	.2	.2	.2	.2	.3	.2	.2	.2	.2	.2	.2	.2
.2	.2	.2	.2	.3	.3	.3	.3	.3	.3	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1	.1	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.3	.3	.2
.3	.3	.3	.3	.3	.2	.2	.3	.3	.3	.2	.2	.2	.3	.3	.2	.2	.1	.0	.0	.1	.1	.0	.1	.1	.1	.2	.2	.2	.2	.2	.3	.3	.3	.4	.4
.4	.3	.3	.2	.2	.1	.0	.1	.1	.1	.1	.1	.1	.1	.2	.2	.1	.0	-.1	.0	.1	-.1	.0	.0	.0	.1	.0	.1	.1	.1	.2	.3	.3	.2	.2	.4
.1	.1	.0	.0	.0	-.1	-.1	-.1	.0	.0	-.1	-.1	-.1	-.1	.0	.0	.0	-.1	-.1	.0	-.1	.0	.0	.0	.0	.0	.0	.0	.1	.0	.1	.0	.0	.0	-.1	.0
-.2	-.2	-.3	-.2	-.2	-.2	-.2	-.3	-.2	-.2	-.3	-.2	-.3	-.3	-.2	-.2	-.1	-.2	-.1	-.1	-.3	-.1	-.2	-.2	-.2	-.1	-.2	-.2	-.2	-.2	-.2	-.3	-.3	-.4	-.3	-.3
-.3	-.3	-.4	-.3	-.3	-.3	-.3	-.4	-.4	-.3	-.4	-.4	-.4	-.4	-.4	-.3	-.3	-.3	-.3	-.3	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.4	-.4
-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.4	-.4	-.4	-.5	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.6	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.4	-.5	-.5	-.4	-.5	-.4	-.4
-.4	-.5	-.5	-.5	-.5	-.4	-.4	-.4	-.4	-.5	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.5	-.5	-.5	-.4	-.4	-.4	-.4	-.5	-.5	-.5	-.5	-.5	-.4	-.4	-.5	-.5	-.5
-.4	-.5	-.5	-.5	-.5	-.4	-.5	-.4	-.4	-.5	-.5	-.5	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.6	-.5	-.5	-.4	-.4	-.5	-.4	-.5	-.5	-.5	-.4	-.5	-.4	-.5	-.5	-.5	-.5
-.4	-.5	-.4	-.5	-.4	-.4	-.4	-.4	-.4	-.5	-.4	-.5	-.4	-.4	-.4	-.4	-.4	-.3	-.4	-.6	-.4	-.5	-.5	-.5	-.5	-.4	-.4	-.5	-.4	-.5	-.4	-.4	-.5	-.4	-.4	-.4
-.2	-.3	-.3	-.4	-.3	-.2	-.3	-.2	-.2	-.3	-.3	-.4	-.4	-.4	-.4	-.3	-.3	-.2	-.3	-.4	-.3	-.4	-.3	-.3	-.3	-.2	-.2	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.2
.0	.0	.0	-.1	-.1	.0	-.1	.0	.0	.0	-.1	.0	-.1	-.1	-.1	-.1	-.1	.0	-.1	-.2	-.2	-.2	-.1	-.1	-.1	.0	.0	.0	.0	-.1	.0	-.1	-.1	.0	.0	.1
.2	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.0	.0	.0	.1	.1	.1	.2	.2	.3	.3	.2	.2	.2	.1	.2	.2	.2	.3
.3	.3	.2	.2	.2	.2	.2	.2	.2	.1	.1	.1	.0	.0	.0	-.1	.0	.0	-.1	.1	.1	.2	.2	.2	.3	.4	.4	.5	.4	.3	.3	.3	.3	.3	.4	.3
.3	.3	.3	.2	.2	.1	.1	.1	.1	.1	.0	-.1	-.1	-.1	-.2	-.1	-.1	-.2	-.1	.0	.0	.1	.1	.2	.2	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3
.1	.1	.2	.1	.1	.0	.0	-.1	-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1	.0	.0	.0	.1	.1	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2
.2	.2	.2	.2	.1	.1	.1	.1	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.2	.2	.3	.3	.3	.3	.2	.2	.3	.3	.3	.3	.4	.3	.3

Figure 52. ATOVS SD O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: AMSUA-7 (300 hPa)
NOAA16, using all observations

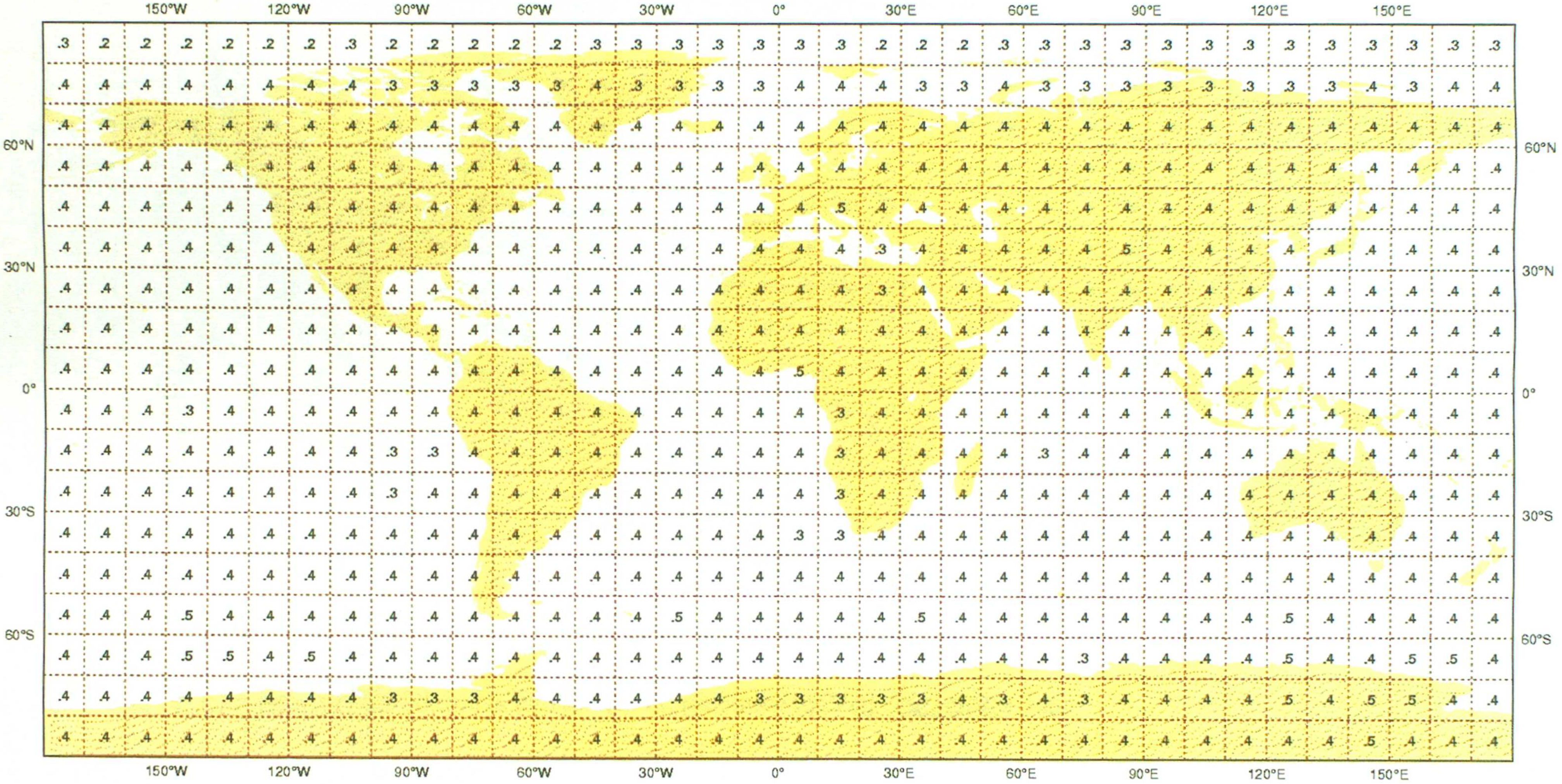
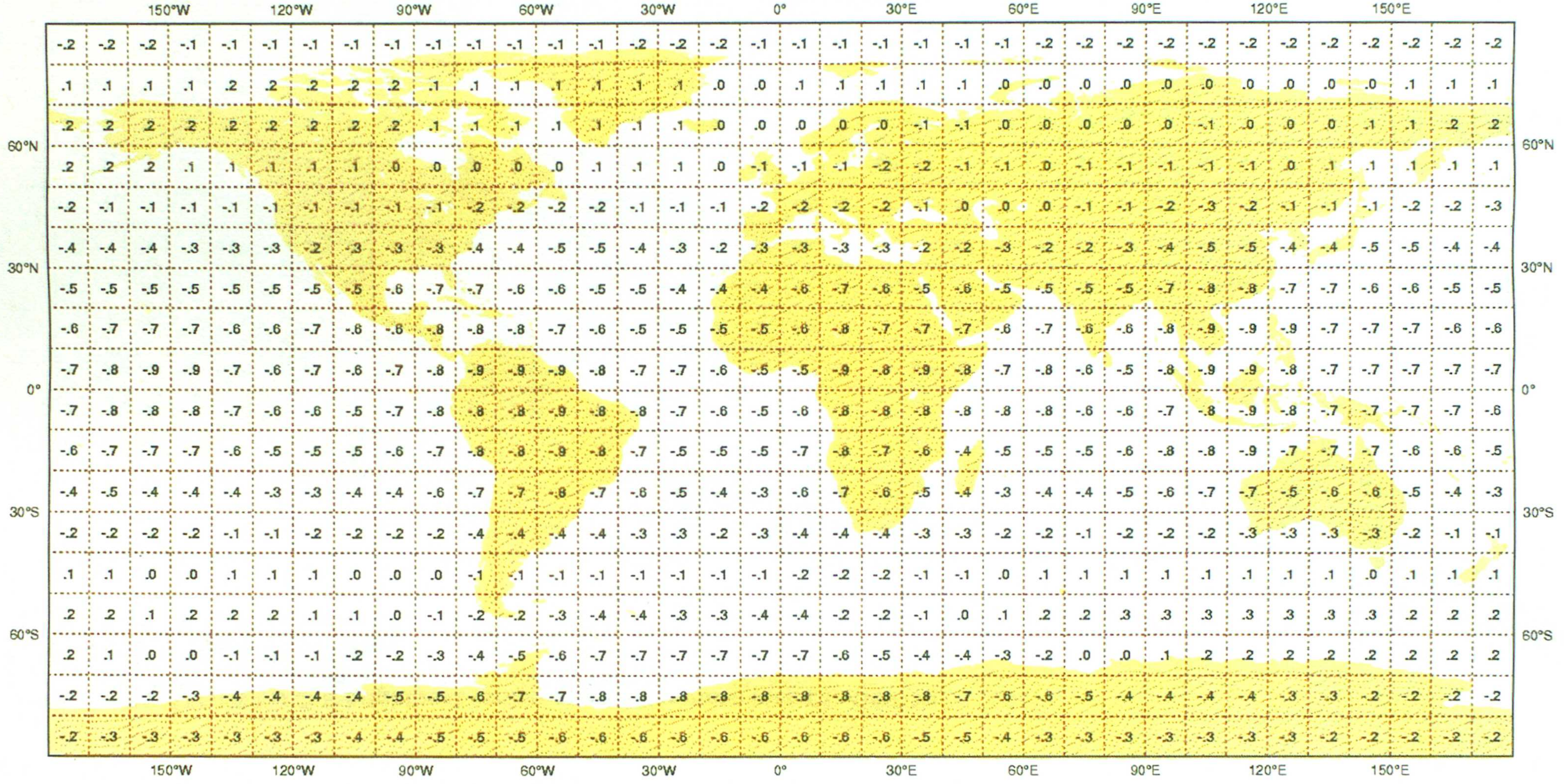
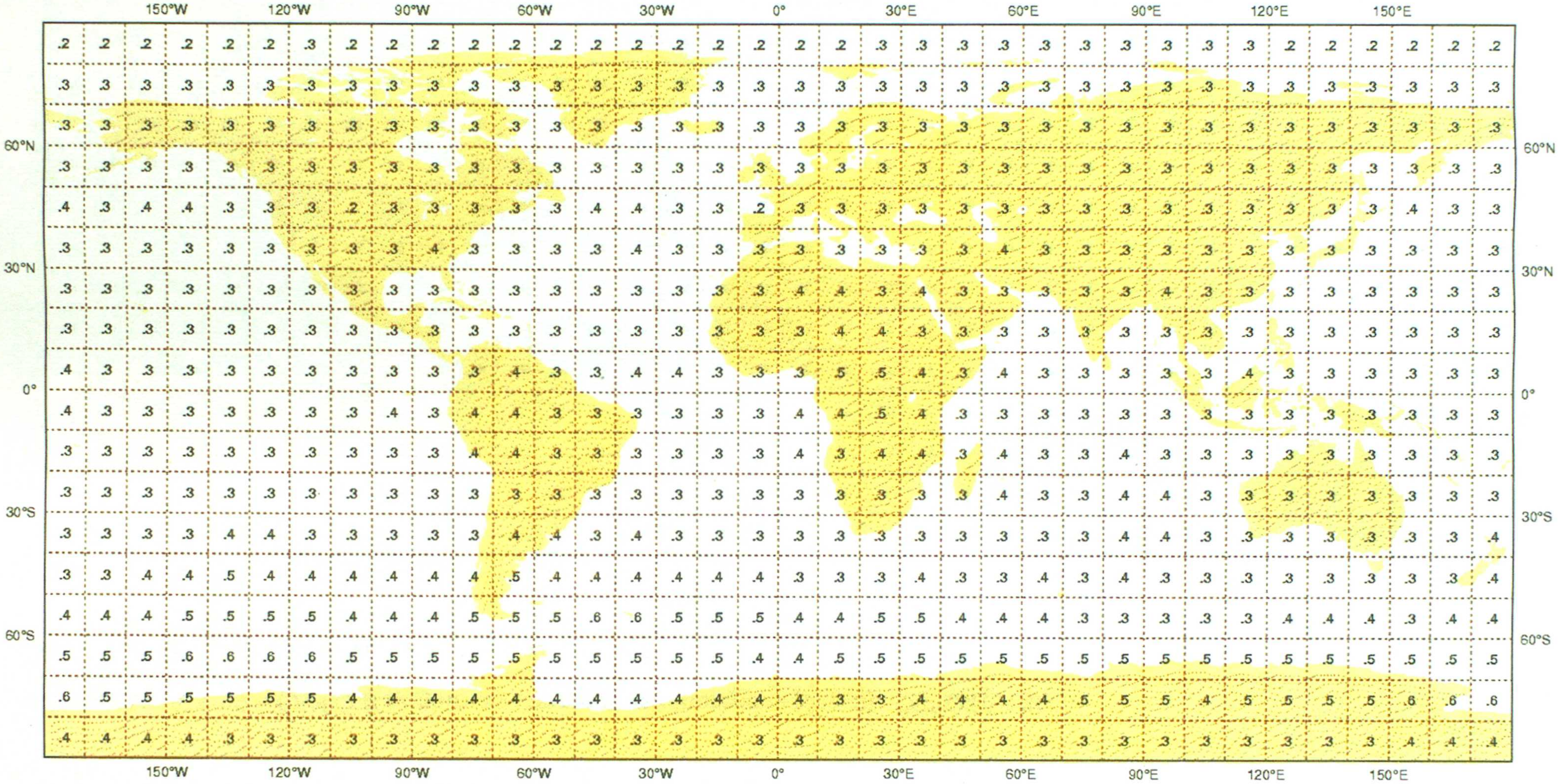

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S

Figure 53. ATOVS MEAN O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: AMSUA-9 (100 hPa)
NOAA16, using all observations



-.2	-.2	-.2	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.2	-.2	-.2	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2
.1	.1	.1	.1	.2	.2	.2	.2	.2	.1	.1	.1	.1	.1	.1	.1	.0	.0	.1	.1	.1	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1
.2	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1	.1	.1	.1	.1	.1	.0	.0	.0	.0	.0	-.1	-.1	.0	.0	.0	.0	.0	-.1	.0	.0	.0	.1	.1	.2	.2
.2	.2	.2	.1	.1	.1	.1	.1	.0	.0	.0	.0	.0	.1	.1	.1	.0	-.1	-.1	-.1	-.2	-.2	-.1	-.1	.0	-.1	-.1	-.1	-.1	-.1	.0	.1	.1	.1	.1	.1
-.2	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.1	.0	.0	.0	-.1	-.1	-.2	-.3	-.2	-.1	-.1	-.1	-.2	-.2	-.3
-.4	-.4	-.4	-.3	-.3	-.3	-.2	-.3	-.3	-.3	-.4	-.4	-.5	-.5	-.4	-.3	-.2	-.3	-.3	-.3	-.3	-.2	-.2	-.3	-.2	-.2	-.3	-.4	-.5	-.5	-.4	-.4	-.5	-.5	-.4	-.4
-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.7	-.7	-.6	-.6	-.5	-.5	-.4	-.4	-.4	-.6	-.7	-.6	-.5	-.6	-.5	-.5	-.5	-.5	-.7	-.8	-.8	-.7	-.7	-.6	-.6	-.5	-.5
-.6	-.7	-.7	-.7	-.6	-.6	-.7	-.6	-.6	-.8	-.8	-.8	-.7	-.6	-.5	-.5	-.5	-.5	-.6	-.8	-.7	-.7	-.7	-.6	-.7	-.6	-.6	-.8	-.9	-.9	-.9	-.7	-.7	-.7	-.6	-.6
-.7	-.8	-.9	-.9	-.7	-.6	-.7	-.6	-.7	-.8	-.9	-.9	-.9	-.8	-.7	-.7	-.6	-.5	-.5	-.9	-.8	-.9	-.8	-.7	-.8	-.6	-.5	-.8	-.9	-.9	-.8	-.7	-.7	-.7	-.7	-.7
-.7	-.8	-.8	-.8	-.7	-.6	-.6	-.5	-.7	-.8	-.8	-.8	-.9	-.8	-.8	-.7	-.6	-.5	-.6	-.8	-.8	-.8	-.8	-.8	-.8	-.6	-.6	-.7	-.8	-.9	-.8	-.7	-.7	-.7	-.7	-.6
-.6	-.7	-.7	-.7	-.6	-.5	-.5	-.5	-.6	-.7	-.8	-.8	-.9	-.8	-.7	-.5	-.5	-.5	-.7	-.8	-.7	-.6	-.4	-.5	-.5	-.5	-.6	-.8	-.8	-.9	-.7	-.7	-.7	-.6	-.6	-.5
-.4	-.5	-.4	-.4	-.4	-.3	-.3	-.4	-.4	-.6	-.7	-.7	-.8	-.7	-.6	-.5	-.4	-.3	-.6	-.7	-.6	-.5	-.4	-.3	-.4	-.4	-.5	-.6	-.7	-.7	-.5	-.6	-.6	-.5	-.4	-.3
-.2	-.2	-.2	-.2	-.1	-.1	-.2	-.2	-.2	-.2	-.4	-.4	-.4	-.4	-.3	-.3	-.2	-.3	-.4	-.4	-.4	-.3	-.3	-.2	-.2	-.1	-.2	-.2	-.2	-.3	-.3	-.3	-.3	-.2	-.1	-.1
.1	.1	.0	.0	.1	.1	.1	.0	.0	.0	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.2	-.2	-.2	-.1	-.1	.0	.1	.1	.1	.1	.1	.1	.1	.1	.0	.1	.1	.1
.2	.2	.1	.2	.2	.2	.1	.1	.0	-.1	-.2	-.2	-.3	-.4	-.4	-.3	-.3	-.4	-.4	-.2	-.2	-.1	.0	.1	.2	.2	.3	.3	.3	.3	.3	.3	.3	.2	.2	.2
.2	.1	.0	.0	-.1	-.1	-.1	-.2	-.2	-.3	-.4	-.5	-.6	-.7	-.7	-.7	-.7	-.7	-.7	-.6	-.5	-.4	-.4	-.3	-.2	.0	.0	.1	.2	.2	.2	.2	.2	.2	.2	.2
-.2	-.2	-.2	-.3	-.4	-.4	-.4	-.4	-.5	-.5	-.6	-.7	-.7	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.8	-.7	-.6	-.6	-.5	-.4	-.4	-.4	-.4	-.3	-.3	-.2	-.2	-.2	-.2
-.2	-.3	-.3	-.3	-.3	-.3	-.3	-.4	-.4	-.5	-.5	-.5	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.5	-.5	-.4	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.2	-.2	-.2	-.2	-.2

Figure 54. ATOVS SD O-B brightness temperature differences (deg C). OCTOBER 2005
Channel: AMSUA-9 (100 hPa)
NOAA16, using all observations



.2	.2	.2	.2	.2	.2	.3	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.2	.2	.2	.2	.2
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.4	.3	.4	.4	.3	.3	.3	.2	.3	.3	.3	.3	.3	.4	.4	.3	.3	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.3	.4	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.4	.4	.3	.3	.3	.5	.5	.4	.3	.4	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3
.4	.3	.3	.3	.3	.3	.3	.3	.4	.3	.4	.4	.3	.3	.3	.3	.3	.3	.4	.4	.5	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.3	.4	.3	.4	.4	.3	.4	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.4	.4	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.3	.3	.4
.3	.3	.4	.4	.5	.4	.4	.4	.4	.4	.4	.5	.4	.4	.4	.4	.4	.4	.3	.3	.3	.4	.3	.3	.4	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.4
.4	.4	.4	.5	.5	.5	.5	.4	.4	.4	.5	.5	.5	.6	.6	.5	.5	.5	.4	.4	.5	.5	.4	.4	.4	.3	.3	.3	.3	.3	.4	.4	.4	.3	.4	.4
.5	.5	.5	.6	.6	.6	.6	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
.6	.5	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.4	.4	.4	.4	.5	.5	.5	.4	.5	.5	.5	.5	.6	.6	.6
.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4

TABLE 8

MONTHLY MONITORING OF MARINE SURFACE OBSERVATIONS (COSNA)
DATA TYPE:- DRIFTER
MONITORING CENTRE: EXETER
MONTH: Oct 05

Monitoring procedures

Period :One calendar month.

Data monitored :Reports from each unique identifier for drifting buoy.

Area monitored :10°N - 80°N, 85°W - 0°W

Standard of comparison :Background field from UKMO global model.

Position :Average latitude and longitude for period.

Observation times :All hours combined.

Elements monitored
:Mean sea-level pressure (hPa)
:Wind speed ($m\ s^{-1}$)
:Wind direction (degrees)

Parameters monitored

:NOBS :Number of observations received excluding duplicates.

:NGE :Number of observations with gross errors.

:PGE :Percentage of observations with gross errors.

:SD :SD of difference of observations from background values excluding those with gross errors.

:BIAS :Mean difference of observations from background values excluding those with gross errors.
N.B. A positive bias indicates the wind observation is veered to the background

:RMS :Root Mean Square difference of observations from background values excluding those with gross errors

GROSS ERROR LIMITS
:15 hPa (pressure)
:25 $m\ s^{-1}$ (Vector Wind)

N.B. Observations of wind direction are only included in the wind direction statistics if the observed OR background wind speed > 5 $m\ s^{-1}$

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
13534	29.7	-36.5	P	754	0	6	0.5	-0.2	0.5
25524	77.9	-5.4	P	514	0	2	0.8	0.1	0.8
25542	77.2	-4.7	P	132	0	69	1.2	-1.2	1.7
41501	12.1	-56.1	P	753	0	9	0.6	0.0	0.6
41502	13.5	-52.6	P	1222	2	47	0.7	1.5	1.7
41525	25.8	-68.5	P	707	0	8	0.7	0.3	0.7
41528	27.2	-74.2	P	739	0	12	0.7	0.8	1.1
41540	39.1	-40.9	P	431	0	7	0.7	1.2	1.4
41542	27.2	-74.0	P	180	13	59	3.1	-3.2	4.5
41543	28.9	-53.7	P	754	0	9	0.5	0.4	0.6
41544	24.3	-64.2	P	957	0	28	0.6	0.6	0.9
41545	23.8	-62.1	P	754	0	9	0.6	1.4	1.5
41625	26.1	-70.7	P	670	0	9	1.1	0.7	1.4
41630	26.6	-74.7	P	698	0	9	0.6	0.2	0.7
41643	22.7	-67.0	P	690	0	7	0.7	0.4	0.8
41645	27.0	-68.9	P	938	0	32	0.7	0.7	1.0
41646	25.3	-75.4	P	670	0	7	0.7	0.3	0.7
41927	30.9	-75.7	P	677	0	40	0.6	0.1	0.6
41929	32.8	-67.6	P	415	22	79	4.7	6.1	7.7
41931	38.4	-65.6	P	562	1	36	1.1	0.3	1.1
41934	29.0	-72.6	P	771	0	45	0.8	-0.5	0.9
41935	32.5	-75.4	P	122	4	70	3.4	5.7	6.6
44549	59.1	-7.2	P	656	0	6	0.6	-0.2	0.6
44550	53.2	-14.3	P	977	0	39	0.5	-0.2	0.6
44607	37.6	-29.1	P	746	0	5	0.6	0.1	0.6
44608	38.6	-28.6	P	740	0	5	0.8	-0.1	0.8
44609	48.8	-21.8	P	633	0	5	0.7	-0.1	0.7
44610	51.9	-36.2	P	749	0	7	0.9	-0.3	1.0
44611	56.8	-25.2	P	740	0	6	0.6	-0.4	0.7
44612	61.9	-7.5	P	672	0	7	0.5	0.0	0.5
44615	44.1	-38.9	P	746	0	6	0.8	-0.5	0.9
44635	42.7	-53.2	P	321	0	10	0.8	1.0	1.3
44636	44.0	-59.7	P	345	0	15	0.6	-0.2	0.7
44637	43.3	-63.1	P	449	0	18	0.9	0.5	1.0
44722	47.8	-21.4	P	725	0	6	0.8	-0.2	0.8
44723	58.9	-41.4	P	749	0	6	0.5	-0.1	0.5
44725	54.4	-42.2	P	747	0	5	0.7	0.4	0.8
44727	40.9	-27.5	P	730	0	4	0.7	0.1	0.7
44728	51.3	-25.3	P	748	0	6	0.5	0.3	0.6
44729	47.4	-58.4	P	740	0	5	0.6	-0.6	0.9
44743	34.9	-13.2	P	695	0	6	0.8	0.6	1.0
44760	52.0	-47.9	P	730	0	5	0.6	-0.1	0.6
44761	45.9	-47.9	P	736	0	5	0.6	0.0	0.6
44831	53.0	-30.9	P	1076	0	37	0.8	-0.2	0.8
44832	54.9	-33.2	P	1021	0	33	1.1	-0.1	1.1
44840	62.6	-12.9	P	625	14	36	3.8	1.0	3.9
44842	60.3	-19.1	P	827	0	15	0.8	-0.3	0.8
44843	59.5	-39.2	P	808	0	14	0.7	0.0	0.7
44844	58.5	-27.4	P	805	0	14	0.6	-0.1	0.6
44845	43.0	-52.1	P	786	0	12	0.6	-0.1	0.6
44846	46.0	-21.8	P	1029	0	34	0.7	0.0	0.7
44847	41.3	-25.3	P	810	0	16	0.7	0.0	0.7
44848	38.1	-35.6	P	907	0	25	0.6	0.1	0.6
44849	47.2	-31.8	P	1009	0	34	1.1	0.0	1.1
44850	44.6	-28.0	P	987	0	31	0.7	-0.3	0.8
44901	37.6	-40.0	P	878	0	21	0.5	0.0	0.5
44903	43.6	-64.2	P	1030	0	34	0.9	0.3	0.9
47555	74.4	-83.2	P	952	0	68	0.7	0.3	0.7
62502	44.7	-4.2	P	647	0	4	0.6	0.2	0.6
62503	45.2	-6.4	P	648	0	4	0.5	0.2	0.5

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
62504	44.9	-10.7	P	754	0	6	0.6	-0.5	0.8
62510	34.6	-23.1	P	740	0	4	0.5	0.1	0.5
62511	45.1	-13.1	P	698	0	6	1.0	0.5	1.1
62514	62.9	-41.6	P	704	0	9	1.7	0.1	1.7
62515	44.8	-8.2	P	775	0	9	0.6	-0.3	0.7
62556	26.9	-38.3	P	744	0	5	0.5	0.1	0.5
62557	25.9	-32.6	P	769	0	8	0.4	0.1	0.4
62560	44.0	-23.5	P	1271	0	48	0.7	0.0	0.7
62562	49.2	-16.2	P	661	0	6	0.8	0.4	0.9
62563	55.8	-6.5	P	4	0	0	0.7	1.4	1.6
62564	38.2	-20.0	P	760	0	7	0.8	0.7	1.1
62566	57.8	-12.1	P	748	0	7	0.6	0.1	0.6
62567	38.6	-18.0	P	714	0	4	0.5	-0.3	0.6
62568	56.5	-16.6	P	740	0	5	0.7	0.4	0.8
62569	55.4	-29.3	P	743	0	6	0.6	0.3	0.7
62570	58.0	-36.5	P	1005	0	30	0.5	0.0	0.5
62901	56.4	-10.8	P	804	0	15	0.5	-0.3	0.6
62907	43.9	-5.6	P	187	0	6	0.6	-0.2	0.6
62908	43.5	-3.8	P	16	0	6	0.4	0.1	0.4
62909	46.5	-8.0	P	27	0	15	0.6	0.2	0.7
62927	43.2	-12.2	P	68	0	21	2.5	-1.1	2.7
62928	45.8	-5.9	P	87	0	2	0.5	-0.1	0.6
62931	39.9	-10.3	P	331	0	9	0.6	-0.4	0.7
62932	46.6	-7.3	P	283	0	6	0.8	-0.1	0.8
62934	47.3	-14.5	P	962	0	30	0.6	0.0	0.6
62935	44.1	-25.4	P	763	0	10	0.5	-0.2	0.6
62936	50.7	-15.0	P	1024	0	34	0.6	0.0	0.6
64609	62.0	-49.7	P	738	0	5	0.8	-0.5	0.9
64612	60.1	-23.6	P	751	0	6	0.6	-0.9	1.1
64613	60.3	-30.4	P	752	0	8	0.7	0.1	0.8
64929	59.5	-22.9	P	1054	0	35	0.6	0.0	0.6

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
41525	25.8	-68.5	SPEED	705	0	100	2.7	-0.7	2.7
41528	27.2	-74.2	SPEED	452	1	100	3.5	0.6	3.5
41542	27.2	-74.0	SPEED	728	1	100	2.1	-1.9	2.8
41543	28.9	-53.7	SPEED	700	0	100	1.6	-3.4	3.8
41625	26.1	-70.7	SPEED	656	0	100	3.1	5.7	6.5
41630	26.6	-74.7	SPEED	687	1	100	3.0	1.0	3.2
41643	22.7	-67.0	SPEED	674	0	100	2.8	0.3	2.8
41645	27.0	-68.9	SPEED	921	0	100	3.4	1.5	3.7
41646	25.3	-75.4	SPEED	656	0	100	3.6	2.7	4.5
41927	30.9	-75.7	SPEED	15	27	100	7.3	2.1	7.6
41931	38.4	-65.6	SPEED	14	50	100	10.3	4.6	11.2
41934	29.0	-72.6	SPEED	7	43	100	10.0	8.3	13.0
41935	32.5	-75.4	SPEED	3	0	100	4.5	-1.7	4.8
41939	37.4	-62.4	SPEED	5	100	0			
62566	57.8	-12.1	SPEED	100	0	100	4.7	4.6	6.5

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
41525	25.8	-68.5	DIRN.	352	0	0	18.5	4.4	19.0
41528	27.2	-74.2	DIRN.	250	1	0	13.0	9.0	15.9
41542	27.2	-74.0	DIRN.	316	3	0	28.6	119.7	123.1
41543	28.9	-53.7	DIRN.	129	0	0	15.1	-13.2	20.1
41625	26.1	-70.7	DIRN.	458	1	0	24.6	12.4	27.6
41630	26.6	-74.7	DIRN.	404	1	0	18.2	15.9	24.2
41643	22.7	-67.0	DIRN.	501	0	0	21.3	33.0	39.3
41645	27.0	-68.9	DIRN.	528	0	0	18.7	18.9	26.6
41646	25.3	-75.4	DIRN.	461	0	0	16.3	6.1	17.4
41927	30.9	-75.7	DIRN.	9	44	0	45.4	4.5	45.6

41931	38.4	-65.6	DIRN.	13	54	0	85.0	4.7	85.2
41934	29.0	-72.6	DIRN.	6	50	0	23.1	15.5	27.8
41935	32.5	-75.4	DIRN.	2	0	0	116.5	-22.5	118.6
41939	37.4	-62.4	DIRN.	5	100	0			
62566	57.8	-12.1	DIRN.	99	0	0	11.9	7.6	14.1

TABLE 9

MONTHLY MONITORING OF AIRCRAFT OBSERVATIONS (COSNA)
MONITORING CENTRE: EXETER
MONTH: Oct 05

Monitoring procedures:

Period :One calendar month.

Data monitored :Statistics for each airline carrier.

Area monitored :40°N - 70°N, 60°W - 0°W.

Standard of comparison :Background field from UKMO global model.

Observation times :All hours combined.

Level(s) monitored :300.0 - 150.0 hPa

Elements monitored :TEMP in °C ; WIND in m s^{-1}

Parameters monitored

:N REP. :Number of observations received excluding duplicates.

:PG :Percentage of observations with gross errors.

:PR :Percentage of observations rejected by quality control including rejections from the duplicate check.

:PC :Percentage of observations with calm winds.

:RMS :Root Mean Square difference of observations from background values excluding those with gross errors in Temperature & vector wind.

:BIAS :Mean difference of observations from background values excluding those with gross errors in Temperature & vector wind.

GROSS ERROR LIMITS :10.0 °C ; 60 m s^{-1} Vector Wind

SELECTION CRITERIA :N REP ≥ 20

NB : All American ACARS data are grouped together and statistics are shown at the bottom of the table as "US ACARS". All ADS reports are similarly grouped together.

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
AAL	4680	0	7	1.4	0.4	4407	0	7	0	4.5	0.6
ACA	1853	0	4	1.4	-0.2	1432	0	3	0	5.3	0.6
ACF	42	7	43	3.0	0.3	20	0	70	0	30.4	-7.4
AEA	373	0	3	1.5	0.2	322	0	5	0	9.7	0.0
AFL	348	0	6	1.7	0.2	164	0	9	0	11.0	-1.4
AFR	4287	0	3	1.3	0.2	4158	0	3	0	5.5	0.5
AJM	132	2	17	2.4	-0.2	85	0	26	0	17.2	1.0
AMT	84	0	7	1.4	0.4	82	0	13	0	11.1	-1.7
AMX	313	1	5	1.6	0.2	235	0	8	0	10.7	-0.1
ANZ	167	0	41	1.2	-0.1	153	0	39	0	4.0	0.1
AUA	485	0	1	1.3	0.6	468	0	1	0	4.6	0.3
AVA	53	0	4	1.6	0.1	53	0	11	0	10.4	-0.7
AZA	239	5	19	2.4	0.4	161	0	8	0	9.9	-0.3
BAL	190	0	8	1.5	0.1	183	1	8	0	7.9	0.4
BAW	562	1	12	1.9	-0.2	358	0	11	0	8.0	0.2
BMA	437	0	5	1.4	0.0	370	0	4	0	5.5	0.5
BPA	148	7	56	3.1	1.5	135	1	15	0	10.4	-0.2
BWA	158	3	9	1.9	-0.3	107	1	4	0	6.5	0.2
CFC	22	0	0	1.6	-0.6	20	0	0	0	3.9	1.0
CFG	334	1	9	1.7	-0.1	235	2	13	0	12.9	0.6
CFY	92	0	0	1.1	-0.4	89	0	1	0	4.9	1.2
CGF	205	0	0	1.2	-0.4	196	0	1	0	3.6	0.4
CGH	326	0	2	1.1	-0.2	301	0	2	0	3.6	0.5
CKS	99	3	13	2.3	0.3	40	0	23	0	13.8	-0.9
CLX	236	0	9	1.9	-0.2	105	0	10	0	10.8	-0.2
CNJ	92	0	53	1.2	0.0	92	0	53	0	5.8	-0.1
COA	5420	0	8	1.7	0.3	5223	0	5	0	4.8	0.5
CRL	72	0	6	1.4	-0.3	66	2	8	0	9.1	-1.1
CUB	89	0	7	1.9	-1.3	66	2	11	0	10.9	0.0
DAB	1192	0	6	1.3	-0.1	1141	0	5	0	4.3	0.3
DAI	912	0	12	1.3	0.3	875	0	12	0	4.2	0.8
DAL	1057	0	5	1.4	0.3	987	0	4	0	5.3	0.4
DLH	6134	0	8	1.3	0.1	5984	0	8	0	4.7	0.4
DRD	86	2	3	1.6	-0.4	86	1	6	0	9.6	0.6
EDW	41	0	10	1.9	-0.5	37	3	16	0	16.7	1.0
EEZ	52	4	21	2.4	-0.3	47	4	13	0	10.7	0.6
EIA	97	3	15	2.0	-0.3	84	4	100	0	22.1	7.3
ELY	348	0	2	1.2	0.1	319	1	2	0	5.1	0.5
ESS	59	3	10	2.2	1.2	22	0	5	0	4.6	0.7
ETH	23	0	9	2.3	-0.5	21	0	0	0	5.9	1.4
FCA	140	1	100	3.3	1.6	78	0	10	0	10.6	-0.7
FDX	705	1	38	1.6	0.4	384	0	36	0	5.3	0.5
FGI	303	0	4	1.1	0.0	284	0	4	0	4.4	0.1
FGL	74	0	0	1.2	0.3	73	0	0	0	4.1	0.2
FGN	30	0	3	1.0	-0.1	29	0	3	0	4.7	1.6
FGS	515	0	3	1.3	0.3	480	0	3	0	4.3	0.7
FGZ	79	0	4	1.2	-0.1	74	0	5	0	3.8	0.7
FIN	161	1	6	1.6	0.1	110	1	4	0	7.0	-0.2
FWI	135	0	15	1.8	-0.3	126	0	11	0	10.0	-0.2
GCO	92	0	11	2.0	0.1	87	1	100	0	10.7	0.0
GOJ	160	0	3	1.2	0.2	144	0	3	0	4.0	0.6
GRL	69	0	3	1.1	0.2	63	0	3	0	3.9	0.8
GTI	184	1	67	1.8	0.4	151	1	6	0	8.6	-0.4
GVA	29	0	7	1.1	-0.3	27	0	7	0	4.4	-0.1
GVB	54	0	6	1.1	0.3	50	0	6	0	4.6	0.5
GVF	124	0	2	1.5	-0.5	115	0	1	0	4.1	0.4
GVG	31	0	10	1.5	-1.0	30	0	7	0	4.7	0.0
GVH	55	0	5	1.0	-0.3	50	0	6	0	4.4	0.6
GVL	44	0	2	1.2	-0.1	43	0	2	0	5.5	1.1

		TEMPERATURE					WIND				
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
GVM	24	0	8	1.0	0.0	23	0	9	0	3.8	-0.1
GVR	180	0	4	1.1	-0.2	169	0	4	0	3.9	-0.1
GVT	35	0	3	1.3	-0.2	33	0	3	0	4.4	0.7
GVW	91	0	2	1.1	-0.3	86	0	2	0	3.5	-0.1
GVX	41	0	2	0.9	0.2	41	0	2	0	3.6	0.5
GWW	131	0	2	1.2	-0.2	124	0	2	0	3.8	0.5
HBI	192	0	5	1.3	-0.4	187	0	5	0	4.9	0.6
HBJ	81	0	1	1.2	-0.2	75	0	1	0	4.4	0.8
IBE	1597	1	8	1.8	0.3	1542	1	5	0	8.6	0.2
ICE	915	0	4	1.5	-0.1	475	0	2	0	4.9	0.3
IWD	204	1	4	1.5	-0.2	204	0	5	0	8.2	1.1
KAC	165	0	4	1.3	0.7	158	0	3	0	4.0	0.2
KLM	818	0	5	1.5	-0.1	648	0	7	0	8.8	0.4
LNR	311	0	39	1.1	-0.2	301	0	38	0	3.6	0.5
LOT	236	0	8	2.0	-0.9	125	0	8	0	10.5	-1.1
LTU	499	1	7	1.9	0.1	359	0	5	0	8.1	0.4
LVG	108	2	9	1.4	0.4	100	0	9	0	6.6	1.7
MPD	150	4	7	1.5	0.5	122	0	9	0	9.1	0.4
MPH	342	1	10	2.3	-0.7	199	1	15	0	13.6	0.4
MSR	76	0	0	1.5	0.8	72	0	0	0	4.6	0.2
MYT	187	3	9	1.8	0.0	104	1	15	0	12.0	0.4
NAO	62	0	5	1.7	0.5	50	0	6	0	7.7	1.1
NWA	2578	1	7	1.7	0.2	2335	0	4	0	6.4	0.3
OAE	198	1	13	1.8	-0.2	95	1	29	0	13.9	0.9
OOM	124	0	10	2.3	0.0	79	0	9	0	8.7	0.1
OYK	492	0	43	1.1	-0.2	470	0	44	0	4.1	0.4
PAC	64	0	11	2.3	-0.3	38	0	8	0	9.6	0.0
PLM	136	1	3	1.8	1.1	126	1	7	0	9.9	-0.9
RAM	215	1	9	1.9	0.3	146	1	10	0	8.9	-0.1
RCH	233	3	100	3.7	-0.8	160	0	100	0	12.9	0.3
RRR	48	2	10	2.4	-1.2	46	0	7	0	11.8	2.2
RZO	191	1	4	1.7	-0.4	168	1	4	0	6.7	0.5
SAS	1044	0	45	1.2	0.0	990	0	44	0	3.9	0.5
SER	388	0	42	1.5	0.4	357	0	43	0	4.3	0.7
SEU	94	2	23	2.2	0.2	67	0	28	0	15.3	1.9
SIA	307	0	2	1.4	0.3	299	0	2	0	4.4	0.5
SLM	23	0	9	1.1	0.2	22	0	9	0	13.0	-1.4
SQC	330	0	1	1.3	0.1	328	0	1	0	4.6	-0.3
SWR	1615	0	3	1.2	-0.2	1569	0	3	0	4.5	0.8
TAP	266	0	5	1.7	-0.5	210	0	5	0	8.2	0.1
TCX	326	1	4	1.2	0.2	277	0	2	0	5.5	0.8
TFL	90	0	10	2.1	-0.7	55	4	15	0	12.3	-0.1
THT	99	0	1	1.2	-0.4	91	0	0	0	4.5	1.1
TSC	289	1	4	1.5	-0.3	174	0	2	0	7.2	0.1
UAE	232	1	4	1.4	0.4	212	0	3	0	6.1	0.4
UAL	4075	0	5	1.2	-0.1	3983	0	5	0	4.2	0.5
UPS	1000	1	53	1.8	-0.3	872	0	51	0	6.8	0.1
USA	1755	0	3	1.2	0.0	1697	0	4	0	4.6	0.6
VIR	2569	0	3	1.2	-0.2	2472	0	3	0	4.6	0.4
WOA	235	0	10	1.7	0.2	180	1	13	0	9.8	0.7
XLA	100	1	12	1.5	-0.2	63	0	11	0	12.2	-0.1
YSS	22	0	0	0.9	0.0	21	0	5	0	7.1	-0.4
ZKN	116	0	3	1.2	-0.1	109	0	3	0	4.1	0.3
ZKS	43	0	2	1.2	-0.4	41	0	2	0	3.3	1.1
9VS	96	0	6	1.1	0.2	91	0	5	0	4.0	0.2

		TEMPERATURE					WIND				
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
EU	33741	0	21	1.2	0.2	33741	0	21	0	4.5	0.3
N	5515	0	14	1.4	-0.1	5147	0	13	0	4.4	0.6
S	35	0	0	1.0	-0.1	35	0	0	0	4.3	-0.1
US AMDAR	39066	0	30	1.3	0.3	39066	0	27	0	4.7	0.1

TABLE 10

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS (COSNA)
MONITORING CENTRE: EXETER
MONTH: Oct 05

Monitoring procedures

Period		:One calendar month.
Data monitored		:Reports from selected radiosonde TEMPs.
Area monitored		:0°N - 90°N, 100°W - 40°E
Standard of comparison		:Background field from UKMO global model.
Position		:Average latitude and longitude for period.
Observation times		:00, 12 UTC.
Level monitored		:100 hPa.
Element monitored		:GEOPOTENTIAL HEIGHT in metres
Parameters monitored	:NUM OBS	:Number of observations available at level shown during period.
	:NUM GROSS	:Number of gross errors at level shown during period.
	:SD	:SD of difference of observations from background values at level shown excluding those with gross errors.
	:BIAS	:Mean difference of observations from background values at level shown excluding those with gross errors.
GROSS ERROR LIMITS	:Defined in Appendix I.1	

WMO IDENT	OBS TIME	ELM	LEV	NUM OBS	NUM GROSS	SD	RMS	BIAS
DBLK	12	Z	100	13	0	14.3	21.8	16.4
EBUQ	12	Z	100	12	0	18.3	19.6	7.3
ELML7	00	Z	100	10	0	8.6	12.2	8.7
ELML7	12	Z	100	12	0	10.3	30.4	28.7
FQFL	00	Z	100	9	0	9.0	11.5	-7.1
FQFL	12	Z	100	10	0	15.0	15.4	-3.1
FQFM	00	Z	100	8	0	6.4	12.0	10.1
FQFM	12	Z	100	9	0	11.8	38.0	36.1
HPII	00	Z	100	7	0	14.0	17.1	-9.9
HPII	12	Z	100	5	0	10.6	12.5	-6.6
KRPD	00	Z	100	4	0	27.4	40.7	30.0
KRPD	12	Z	100	9	1	12.2	24.9	21.8
LDWR	00	Z	100	29	0	15.9	15.9	-1.6
LDWR	12	Z	100	28	0	10.7	10.7	-1.1
OXVH2	00	Z	100	6	1	10.6	15.9	11.8
OXVH2	12	Z	100	6	0	21.0	22.8	8.8
OXYH2	00	Z	100	5	0	9.8	14.0	10.0
OXYH2	12	Z	100	5	0	9.5	29.4	27.8
SKUN	00	Z	100	8	0	17.0	46.0	42.8
SKUN	12	Z	100	4	0	9.1	43.9	43.0
V2BD9	00	Z	100	7	0	6.9	19.8	18.6
V2BD9	12	Z	100	9	0	12.2	23.8	20.4
V2XM	00	Z	100	3	0	10.6	27.5	25.3
V2XM	12	Z	100	4	1	19.8	39.8	34.5
WAAH	00	Z	100	10	0	39.3	49.0	29.3
WAAH	12	Z	100	7	0	11.1	45.2	43.9
WPKD	00	Z	100	4	0	3.9	10.0	9.3
WPKD	12	Z	100	7	0	8.3	19.7	17.9
ZCBP6	00	Z	100	7	0	11.2	39.6	38.0
ZCBP6	12	Z	100	9	0	37.4	65.0	53.1
03953	00	Z	100	30	0	14.4	17.3	9.5
03953	12	Z	100	30	0	29.5	36.9	22.2
04018	00	Z	100	27	0	8.9	9.0	0.7
04018	12	Z	100	29	0	15.6	16.1	3.8
04220	00	Z	100	27	0	9.6	13.3	9.3
04220	12	Z	100	27	0	8.3	13.9	11.1
04270	00	Z	100	28	0	11.5	11.5	-1.0
04270	12	Z	100	30	0	8.1	9.1	4.3
04339	00	Z	100	30	0	17.0	19.3	-9.0
04339	12	Z	100	28	0	10.4	11.8	-5.5
04360	00	Z	100	30	0	17.2	19.0	7.9
04360	12	Z	100	31	0	16.2	19.3	10.6
08001	00	Z	100	27	0	9.7	23.8	21.7
08001	12	Z	100	26	0	9.1	33.6	32.4
08508	12	Z	100	29	0	15.2	32.8	29.1
08522	12	Z	100	29	0	10.1	12.4	7.2
08594	12	Z	100	7	0	22.7	24.2	8.3
71600	00	Z	100	30	0	12.3	12.8	3.5
71600	12	Z	100	30	0	12.0	14.4	7.9
72201	00	Z	100	23	0	15.8	16.0	2.0
72201	12	Z	100	23	0	13.2	25.9	22.2
72402	00	Z	100	29	0	34.3	35.3	8.3
72402	12	Z	100	29	0	14.2	15.9	7.1
74494	00	Z	100	27	0	14.2	16.3	8.0
74494	12	Z	100	27	0	12.3	13.7	-5.9
78016	00	Z	100	28	0	9.1	14.4	11.2
78016	12	Z	100	28	1	11.9	17.3	12.6

TABLE 11

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS (COSNA)
MONITORING CENTRE: EXETER
MONTH: Oct 05

Monitoring procedures:

Period		:One calendar month.
Data monitored		:Reports from selected radiosonde TEMPs.
Area monitored		:0°N - 90°N, 100°W - 40°E
Standard of comparison		:Background field from UKMO global model.
Position		:Average latitude and longitude for period.
Observation times		:00, 12 UTC.
Level monitored		:500 hPa.
Element monitored		:GEOPOTENTIAL HEIGHT in metres
Parameters monitored	:NUM OBS	:Number of observations available at level shown during period.
	:NUM GROSS	:Number of gross errors at level shown during period.
	:SD	:SD of difference of observations from background values at level shown excluding those with gross errors.
	:BIAS	:Mean difference of observations from background values at level shown excluding those with gross errors.
GROSS ERROR LIMITS	:Defined in Appendix I.1	

WMO IDENT	OBS TIME	ELM	LEV	NUM OBS	NUM GROSS	SD	RMS	BIAS
DBLK	12	Z	500	13	0	24.0	24.5	-5.0
EBUQ	12	Z	500	15	0	5.7	10.1	-8.3
ELML7	00	Z	500	10	0	8.7	9.2	-3.1
ELML7	12	Z	500	13	0	6.9	6.9	-0.2
FQFL	00	Z	500	9	0	10.6	18.9	-15.7
FQFL	12	Z	500	13	0	16.4	21.1	-13.3
FQFM	00	Z	500	9	0	6.1	7.2	-3.7
FQFM	12	Z	500	9	0	6.8	8.8	5.7
HPII	00	Z	500	11	0	13.0	16.8	-10.6
HPII	12	Z	500	7	0	9.3	12.3	-8.0
KRPD	00	Z	500	5	0	29.5	35.2	19.2
KRPD	12	Z	500	10	1	12.9	13.4	3.9
LDWR	00	Z	500	29	0	8.3	8.9	-3.3
LDWR	12	Z	500	29	0	6.6	6.6	-1.0
OXVH2	00	Z	500	6	1	4.5	7.4	5.8
OXVH2	12	Z	500	6	0	16.1	17.9	8.0
OXYH2	00	Z	500	5	0	9.2	10.2	4.6
OXYH2	12	Z	500	5	0	8.9	13.0	9.4
SHIP	00	Z	500	1	0	0.0	25.0	25.0
SKUN	00	Z	500	8	0	15.1	26.5	21.8
SKUN	12	Z	500	4	0	8.0	34.7	33.8
V2BD9	00	Z	500	7	0	4.1	6.0	4.3
V2BD9	12	Z	500	9	0	5.8	7.8	5.2
V2XM	00	Z	500	3	0	16.2	28.4	23.3
V2XM	12	Z	500	4	1	12.9	30.4	27.5
WAAH	00	Z	500	12	0	18.8	28.8	21.8
WAAH	12	Z	500	10	0	5.4	28.4	27.9
WPKD	00	Z	500	4	0	6.5	6.9	-2.3
WPKD	12	Z	500	7	0	4.2	4.3	0.4
ZCBP6	00	Z	500	7	0	11.3	25.1	22.4
ZCBP6	12	Z	500	10	0	13.6	36.3	33.7
03953	00	Z	500	30	0	6.7	7.0	-2.1
03953	12	Z	500	30	0	19.1	19.6	4.3
04018	00	Z	500	29	0	7.1	7.1	0.7
04018	12	Z	500	30	0	9.3	9.7	2.7
04220	00	Z	500	27	0	8.6	11.3	7.3
04220	12	Z	500	27	0	5.7	11.0	9.5
04270	00	Z	500	29	0	6.8	6.8	-0.1
04270	12	Z	500	30	0	8.1	8.8	3.5
04339	00	Z	500	30	0	10.8	11.9	-5.0
04339	12	Z	500	28	0	7.3	7.3	-0.1
04360	00	Z	500	30	0	16.0	16.2	2.4
04360	12	Z	500	31	0	14.0	14.7	4.6
08001	00	Z	500	29	0	6.9	6.9	0.3
08001	12	Z	500	28	0	6.8	6.9	1.1
08508	12	Z	500	29	0	9.6	10.6	-4.3
08522	12	Z	500	29	0	7.6	11.5	-8.6
08594	12	Z	500	9	0	7.7	7.8	-1.7
71600	00	Z	500	30	0	6.5	6.7	-1.5
71600	12	Z	500	30	0	10.5	10.6	1.5
72201	00	Z	500	23	0	7.2	8.9	-5.2
72201	12	Z	500	23	0	4.6	4.8	-1.6
72402	00	Z	500	30	0	12.1	12.3	-1.9
72402	12	Z	500	29	0	8.3	8.4	-0.7
74494	00	Z	500	28	0	7.5	7.9	-2.4
74494	12	Z	500	27	0	6.9	7.0	-1.3
78016	00	Z	500	28	0	8.6	10.2	5.6
78016	12	Z	500	29	1	13.9	16.0	7.9

TABLE 12

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS (COSNA)
MONITORING CENTRE: EXETER
MONTH: Oct 05

Monitoring procedures		
Period		:One calendar month.
Data monitored		:Reports from selected radiosonde TEMPs.
Area monitored		:0°N - 90°N, 100°W - 40°E
Standard of comparison		:Background field from UKMO global model.
Position		:Average latitude and longitude for period.
Observation times		:00, 12 UTC.
Level monitored		:100 hPa.
Element monitored		:VECTOR WIND in m s^{-1}
Parameters monitored	:NUM OBS	:Number of observations available at level shown during period.
	:NUM GROSS	:Number of gross errors at level shown during period.
	:UBIAS,VBIAS	:Mean difference of observations of U and V components from background values at level shown excluding those with gross errors.
	:RMS	:Root Mean Square difference of observations from background values at level shown excluding those with gross errors.
GROSS ERROR LIMITS	:Defined in Appendix I.2	

WMO IDENT	OBS TIME	ELM	LEV	NUM OBS	NUM GROSS	% REJ	RMS	UBIAS	VBIAS
DBLK	12	V	100	13	0	0	5.3	-0.1	0.0
EBUQ	12	V	100	12	0	0	5.1	-0.3	-2.2
ELML7	00	V	100	10	0	0	3.9	1.7	1.5
ELML7	12	V	100	12	0	0	3.6	0.6	0.8
FQFL	00	V	100	8	0	0	5.8	-0.5	-1.4
FQFL	12	V	100	10	0	0	3.9	0.0	0.8
FQFM	00	V	100	8	0	0	3.2	-0.5	-0.8
FQFM	12	V	100	8	0	0	3.0	0.3	0.1
HPII	00	V	100	8	0	0	4.7	0.2	-1.5
HPII	12	V	100	5	0	0	3.0	-0.1	0.5
KRPD	00	V	100	4	0	25	3.3	-0.1	2.0
KRPD	12	V	100	10	0	70	3.2	0.1	0.8
LDWR	00	V	100	29	0	0	3.2	0.4	-0.5
LDWR	12	V	100	28	0	0	3.1	1.1	-0.4
OXVH2	00	V	100	2	0	0	4.1	-2.5	0.7
OXVH2	12	V	100	2	0	0	2.2	-0.7	-0.6
OXYH2	00	V	100	4	0	0	5.9	0.2	1.1
OXYH2	12	V	100	1	0	0	1.4	1.0	1.0
SKUN	00	V	100	8	0	0	4.5	-0.7	-0.1
SKUN	12	V	100	4	0	0	4.5	4.1	-0.6
V2BD9	00	V	100	7	0	0	4.4	0.3	-1.2
V2BD9	12	V	100	9	0	0	3.3	0.6	0.4
V2XM	00	V	100	2	0	0	2.6	0.8	-0.4
V2XM	12	V	100	3	0	0	4.5	1.6	1.0
WAAH	00	V	100	10	0	0	3.6	-2.2	0.0
WAAH	12	V	100	7	0	0	3.0	-0.3	0.8
WPKD	00	V	100	4	0	0	5.0	2.5	-0.5
WPKD	12	V	100	7	0	0	3.7	-1.2	-0.9
ZCBP6	00	V	100	5	0	0	4.4	0.9	-0.2
ZCBP6	12	V	100	7	0	0	4.1	-1.4	1.2
03953	00	V	100	30	0	0	3.8	-1.0	0.8
03953	12	V	100	29	0	0	2.5	0.4	-0.2
04018	00	V	100	27	0	0	2.6	0.0	0.2
04018	12	V	100	28	0	0	2.6	0.5	0.0
04220	00	V	100	27	0	0	2.6	-0.2	-0.3
04220	12	V	100	27	0	0	2.8	-0.7	-0.2
04270	00	V	100	27	0	0	3.7	-0.4	0.0
04270	12	V	100	30	0	0	4.3	0.4	0.5
04339	00	V	100	30	0	13	12.2	0.2	-0.1
04339	12	V	100	28	0	3	6.9	3.1	-1.9
04360	00	V	100	30	0	0	4.8	0.9	-1.1
04360	12	V	100	30	0	0	3.5	-0.4	0.7
08001	00	V	100	20	0	100	8.1	-4.8	-3.5
08001	12	V	100	23	0	100	10.4	-6.7	-4.1
08508	12	V	100	17	0	0	5.3	-0.7	1.4
08522	12	V	100	21	0	0	4.3	0.9	0.6
08594	12	V	100	7	0	100	3.5	-0.1	-1.6
71600	00	V	100	29	0	0	4.1	0.2	-0.6
71600	12	V	100	30	0	0	4.1	1.0	-0.1
72201	00	V	100	23	0	0	3.6	0.1	-0.6
72201	12	V	100	23	0	0	3.3	0.2	0.0
72402	00	V	100	29	0	0	4.9	1.0	-0.1
72402	12	V	100	29	0	0	4.4	-0.2	0.3
74494	00	V	100	26	0	0	3.2	-0.2	-0.2
74494	12	V	100	27	0	0	2.8	-0.1	0.3
78016	00	V	100	28	0	0	4.4	0.8	-1.2
78016	12	V	100	29	0	0	5.4	0.5	-0.3

TABLE 13

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS (COSNA)
MONITORING CENTRE: EXETER
MONTH: Oct 05

Monitoring procedures

Period :One calendar month.

Data monitored :Reports from selected radiosonde TEMPs.

Area monitored :0°N - 90°N, 100°W - 40°E

Standard of comparison :Background field from UKMO global model.

Position :Average latitude and longitude for period.

Observation times :00, 12 UTC.

Level monitored :500 hPa.

Element monitored :VECTOR WIND in m s^{-1}

Parameters monitored :NUM OBS :Number of observations available at level shown during period.

:NUM GROSS :Number of gross errors at level shown during period.

:UBIAS,VBIAS: Mean difference of observations of U and V components from background values at level shown excluding those with gross errors.

:RMS :Root Mean Square difference of observations from background values at level shown excluding those with gross errors.

GROSS ERROR LIMITS :Defined in Appendix I.2

WMO IDENT	OBS TIME	ELM	LEV	NUM OBS	NUM GROSS	% REJ	RMS	UBIAS	VBIAS
DBLK	12	V	500	13	0	0	5.2	-1.6	1.1
EBUQ	12	V	500	15	0	0	4.1	-2.1	1.1
ELML7	00	V	500	10	0	0	3.9	1.0	0.8
ELML7	12	V	500	13	0	0	3.7	0.0	-1.2
FQFL	00	V	500	9	0	0	5.4	0.4	0.6
FQFL	12	V	500	13	0	0	4.6	-0.2	1.4
FQFM	00	V	500	9	0	0	2.8	-1.1	-1.0
FQFM	12	V	500	9	0	0	3.1	-0.4	1.2
HPII	00	V	500	12	0	0	5.6	-0.9	-0.1
HPII	12	V	500	7	0	0	5.1	-0.9	-1.5
KRPD	00	V	500	5	0	40	1.8	0.4	0.9
KRPD	12	V	500	11	0	63	3.1	-0.3	0.8
LDWR	00	V	500	29	0	0	4.8	1.1	-0.8
LDWR	12	V	500	29	0	0	2.8	0.3	-0.2
OXVH2	00	V	500	3	0	0	3.0	-0.2	0.1
OXVH2	12	V	500	3	0	0	4.5	0.4	-3.2
OXYH2	00	V	500	4	0	0	3.0	-1.0	0.0
OXYH2	12	V	500	3	0	0	4.1	-0.6	0.2
SKUN	00	V	500	8	0	0	5.7	1.8	0.2
SKUN	12	V	500	4	0	0	3.0	0.7	1.4
V2BD9	00	V	500	7	0	0	4.6	-0.9	1.2
V2BD9	12	V	500	9	0	0	3.8	0.3	-0.3
V2XM	00	V	500	2	0	0	2.5	0.3	0.6
V2XM	12	V	500	3	0	0	3.8	-0.7	-2.2
WAAH	00	V	500	12	0	0	3.4	-0.7	0.5
WAAH	12	V	500	10	0	0	3.0	-0.8	0.6
WPKD	00	V	500	4	0	0	2.3	0.6	0.1
WPKD	12	V	500	7	0	0	2.9	-0.5	0.1
ZCBP6	00	V	500	7	0	0	3.5	0.7	-1.4
ZCBP6	12	V	500	8	0	0	3.4	1.2	-0.2
03953	00	V	500	29	0	0	4.3	0.2	0.1
03953	12	V	500	30	0	0	3.4	0.5	0.3
04018	00	V	500	29	0	0	3.2	0.1	-0.3
04018	12	V	500	30	0	3	5.4	1.9	-1.8
04220	00	V	500	27	0	0	3.4	-0.7	-0.2
04220	12	V	500	27	0	0	3.2	-0.2	-1.0
04270	00	V	500	29	0	0	3.2	-0.6	1.0
04270	12	V	500	30	0	0	3.4	-0.3	0.8
04339	00	V	500	30	0	3	6.4	-1.3	0.8
04339	12	V	500	28	0	0	5.0	0.7	-1.6
04360	00	V	500	30	0	0	3.8	0.3	0.0
04360	12	V	500	30	0	0	4.1	0.1	0.4
08001	00	V	500	27	0	100	5.6	-1.7	-1.0
08001	12	V	500	26	0	100	6.3	-2.5	-2.4
08508	12	V	500	17	0	0	5.8	0.7	1.3
08522	12	V	500	27	0	0	4.1	0.1	-0.2
08594	12	V	500	9	0	100	2.4	-0.5	1.2
71600	00	V	500	30	0	3	5.4	-0.4	-0.6
71600	12	V	500	30	0	0	4.4	-0.3	0.5
72201	00	V	500	23	0	0	3.1	-0.2	0.2
72201	12	V	500	23	0	0	2.8	-0.6	-0.4
72402	00	V	500	30	0	0	3.5	0.3	1.0
72402	12	V	500	29	0	0	4.1	0.4	-1.0
74494	00	V	500	28	0	7	6.1	-1.0	0.6
74494	12	V	500	27	0	0	4.5	-0.8	0.5
78016	00	V	500	28	0	0	4.6	0.8	0.2
78016	12	V	500	30	0	0	3.9	0.6	0.6

APPENDIX I

1. The gross error limits for observation minus background differences of geopotential height in Tables 5, 10 and 11 are:-

Level (hPa)	Geopotential height (metres)
1000	100
850	100
700	100
500	150
400	175
300	200
250	225
200	250
150	275
100	300
70	375
50	400
30	450

The weighted RMS values used in Table 5,10 and 11 are calculated using the following weights:-

Level (hPa)	Weight
1000	3.70
850	3.40
700	2.90
500	2.20
400	1.90
300	1.60
250	1.50
200	1.37
150	1.19
100	1.00
70	0.87
50	0.80
30	0.64

2. The gross error limits for observation minus background differences of windspeed in Tables 6,12 and 13 are:-

Level (hPa)	Windspeed m s^{-1}
1000	35
850	35
700	40
500	45
400	50
300	60
250	60
200	50
150	50
100	45